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OF

FOREST ADMINISTRATION

IN THE

CENTRAL PROVINCES

FOR

1869-70.

By Mr. W JACOB

Offg. Conservator of Forests

TOGETHER WITH A REVIEW BY THE CHIEF COMMISSIONER

AND

ORDERS THEREON BY THE GOVERNMENT OF INDIA.

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CONTENTS.

Review by the Chief Commissioner.

CONSERVATOR'S REPORT.

NORTHERN DIVISION.

Page.

Introduction, statistical data, &c. 1

FIRST PART—SPECIAL.

HEAD I.

SECTION I.

Area, boundaries, &c. 3

SECTION II.

Requirements of the population, &c. 4

SECTION III.

Protection of the forests 4

SECTION IV.

Management and improvement of the forests 5

SECTION V.

Yield and working of the forests 6

HEADS II AND III.

Unreserved forests; village and private forests 8

Statement of Receipts and Charges for the years 1867-68, 1868-69, and 1869-70 ... 9

CENTRAL DIVISION.

Introduction 9

HEAD I.

SECTION I.

Area, boundaries, &c. 9

SECTION II.

Requirements of the population, &c. 10

SECTION III.

Protection of the forests 10

SECTION IV.

Management and improvement of the forests 10

SECTION V.

Yield and working of the forests 11

Statement of Receipts and Charges for the year 1867-68, 1868-69, and 1869-70 ... 11

WESTERN DIVISION.

Introduction 11

FIRST PART—SPECIAL

HEAD I.

SECTION I.

Area, boundaries, &c. 13

SECTION II.

Requirements of the population 13

SECTION III.

Protection of the forests 13

SECTION IV.

Management and improvement of the forests 14

SECTION V.

Yield and working of the forests 15

Statement of Receipts and Charges for the years 1867-68, 1868-69, and 1869-70 ... 17

Page.

EASTERN DIVISION

Introduction 17

HEAD I

SECTION I.

Area, boundaries, &c 17

SECTION II.

Requirements of the population 18

SECTION III.

Protection of the forests 18

SECTION IV.

Management and improvement of the forests 18

SECTION V

Yield and working of the forests 18

SOUTHERN DIVISION.

Introduction 19

HEAD I

SECTION IV.

Management and improvement of the forests 19

SECTION V.

Yield and working of the forests 20

Statement of Receipts and Charges for the years 1867-68, 1868-69, and 1869-70 . 21

HEAD II.

UNRESERVED OR DISTRICT FORESTS

Comparative Statement of forest receipts for 1868-69 and 1869-70 25

HEAD I.

Financial results 26

SECOND PART—GENERAL

HEAD II.

General remarks 27

APPENDICES.

Annual Summary of Revenue and Expenditure.
Annual Abstract Cash Account.
Annual Statement of Outstandings and Liabilities.
Statement of Timber brought to Depôts.
Annual Timber Account and Abstract.
Statement of amount realized on account of timber sold.
Statement of outlay on account of timber received from the Forest Divisions.
Annual Account of Forest Revenue.

Map of the Western Division Forests.
Sketch Map of Deogurh Reserve.

ORDERS BY THE GOVERNMENT OF INDIA

Public Works Department letter to the Chief Commissioner of the Central Provinces, No. 702 F, dated 18th November 1870.

Central Provinces' Book Circular to Commissioners of Divisions, No. XXVI of 1868.
Letter from the Inspector General of Forests, to the Secretary to Chief Commissioner Central Provinces, No. 239, dated 28th September 1869.

No. 1623
161.

From

The SECRETARY to the CHIEF COMMISSIONER,

Central Provinces.

To

The CONSERVATOR of FORESTS,

Central Provinces.

Dated Nagpore, the 20th June 1870.

Sir,

I am directed to acknowledge the receipt of your report on the working of the Forest Department during the year 1869-70, and to communicate the remarks which the Chief Commissioner has to make regarding the operations which have been carried on in the various Forest Divisions.

2. In the Northern Division which comprises 8 Reserves, the chief work of the year has been the extension of the plantations in the Garhakotah and Aheree Reserves, and the conduct of the sleeper operations in the forests of the Maikal range and at the Garhakotah timber depot.

3. You anticipate that the Garhakotah plantations will now prove a success and your own personal attention seems to have been directed to them. The results, however, up to the end of the year were not very favourable. Only 750 plants were placed out and the outlay on the plantation was Rs. 907. A total expenditure of Rs. 4,383 since the commencement of the plantation experiment was represented by 6,982 teak plants on an area of 15 acres.

4. Again, the Aheree plantation, which at the close of last official year was reported to consist of 49 acres with 24,875 teak plants, now covers an area of 56 acres on which there are 41,190 plants alive. On this plantation, the total expenditure has been Rs. 13,959. There appears to be some mistake in the figures which show the number of plants which died during the year and those which were planted out to replace them. It is clear that if only 24,875 plants existed at the close of last year, it was impossible that 27,690 were required to replace the number that had died, and if only 5,330 plants were placed in the new ground, there is a difficulty in accounting for the existence of more than 30,205 plants at the close of the year under report.

The mistake can probably be set right.

5. As in the case of the Garhakotah plantations, the Chief Commissioner hardly thinks that the results attained are commensurate with the expenditure incurred. He is therefore glad to learn that you have made a fresh selection of more favourable sites both for nurseries and plantations, and that you feel you "may with safety hold out prospects of increased results in future at a decreased rate of expenditure."

6. Under the head of field and working of forests, the supply of sleepers to the Great Indian Peninsula Railway Company, was the only operation of importance.

7. The Chief Commissioner believes that the arrangements made for delivering these sleepers were as good as it was possible to make, considering the urgency of the case and the short time that could be allowed for the performance of the work. No doubt the execution of the contract was attended with very considerable expense and actual loss to the department, so far at any rate as the operations of the Northern Division were concerned, but the case was altogether a special one.

8. Now that this large work has been completed, the actual working of the forests will be very much contracted and the administrative officers will have more time to devote to forest conservancy.

9. In your para 14, you notice that fires have now been excluded from the Jagmandal and Chowreegogurh Reserves for 3 years. It is quite clear from this and from the case of the Boree Reserve, noticed by you in a subsequent part of your report, that it is quite possible to keep fires entirely out of a reserve, but this can only be effected by a large establishment. To keep out fires is in some respects a distinct advantage, but the Chief Commissioner concurs with you in thinking that the advantages may in many cases not be commensurate with the outlay required for the necessary establishment. The Chief Commissioner would not desire to keep up large establishments for every reserve for the purpose of excluding fires, and he agrees with you that, unless a less costly machinery can be introduced, or the remunerative nature of the outlay for this purpose be more clearly established, the experiment had better be abandoned.

Central Division.

10. Beyond the further clearing of boundary lines in the reserves of this Division and the construction of boundary marks, little work has been going on, and the revenue collected by the Department has been obtained from the lease in certain forest blocks, of the privilege of grazing cattle and cutting grass &c.

Western Division.

11. The Western Division is a very large one and the reserves in it cover an area exceeding 2,000 square miles. The various reserves are, however, spread over a very large tract of country. It is unfortunate that there should have been so many changes of the officers who have had charge of this Division. The result has been that the Division has been neglected and there has been a want of order and system in administering it.

12. The only plantation in the Division is at Bankahurda in the Bowergurh Forest. The plantation is in the valley of the Machna and is reported to you to be admirably adapted for artificial planting. It consists of 40 or 50 acres on which there are 18,418 plants. The experiment had cost up to the end of the year Rs. 7,866.

13. The Chief Commissioner is glad to learn that this plantation is so successful, but the expenditure has been large, and he hopes that under the present Assistant Conservator, a more economical but not less effectual system will be followed. The necessity of reducing the nominal value of the timber stock of the Division was brought separately by you before the Chief Commissioner and he agreed to your proposals.

14. That the deterioration of the stock should not have been reported until the occasion of your own tour through the Western Division shows how unsatisfactory a state of affairs existed there.

15. Now that there is every prospect of the officer in charge of the Division remaining there for a considerable time to come, the Chief Commissioner will look for improvement in its management.

16. In the Eastern Division there was little done beyond an enumeration of the timber in the Panabaras Forest and some extension of the plantation existing there.

17. Similarly in the Southern Division the principal work done was an enumeration of trees in the Aheree forest, of which a survey was made and maps prepared.

Unreserved or District Forests.

18. In the management of unreserved forests great success has been attained during the year. From Rs. 2,49,162 the receipts have risen to Rs. 3,14,898, and this result is entirely due to the better system of management which has been adopted. You remark that "as yet no uniform system of administering district forests has been initiated." This is certainly the case, but the Chief Commissioner does not view this want of uniformity as in itself a circumstance necessarily to be deprecated. The old system of annual leases was rigidly uniform, but it was not everywhere successful.

19. The following extract from the Chief Commissioner's review of the Revenue Administration of the Central Provinces during the past year sets forth very clearly Mr. Morris' opinion on this subject. The old system "admitted of no diversity of adaptation in different districts, and the conviction had "come home to all who had given attention to the subject that it would be well "both for the interests of the people and the revenue to sacrifice uniformity, if "necessary, to the attainment of a more varied and discriminating system of "forest administration. When the Government wastes were first demarcated, "we had no experience to guide our choice of a system and we did not fully appre-"ciate the diversity of treatment which different districts would require. In one "place the forests lie in compact blocks on the outskirts of highly cultivated "parts; in others they are scattered and interspersed among Malgoozaree areas. "In some districts again, Railways and large towns give a growing value and "importance to the reserved tracts, while in others they are almost inaccessible "except to the forest tribes. It is not surprising then that, as will be seen in the "reports on forest administration, different district officers have elaborated plans "differing widely in character for their respective districts. Mr. Morris is quite "willing that this should be the case, and he believes that without remitting "proper supervision, the best mode of attaining to efficiency in forest adminis-"tration is that which has been adopted of allowing local officers to work out "for themselves schemes adapted to the conditions and circumstances of their "several districts."

20. In some districts the plan to be ultimately adopted has not yet been determined on and the matter still remains under discussion. In others a totally new system has already been introduced.

21. The very ingenious method followed in Nimar has resulted in a great increase of revenue. At the same time the people have supplied themselves with fuel, grass and other forest produce on far more favourable terms than at any period while the annual leases of unreserved forests existed. The Nimar plan is briefly to grant on easy terms a licence to each house-holder, which enables him to take from the forest all that he requires for the use of his household. Herdsmen take out licences authorising them to graze the number of cattle noted in their licence.

22. Special licences are granted to applicants enabling them to remove from the forest the amount and description of forest produce entered in their licence, and special licences are granted to Bunjaras authorising them to pasture their cattle in Government wastes for short periods. In large towns, instead

of licences being granted to house-holders to take what they require for their wants, special licences to bring from the jungle firewood &c., are issued to recognised dealers, for which they pay according to the length of time for which the licence is to remain in force.

23. These licences were issued by Tehseeldars, Lumberdars and Putwarees. The forest preventive establishment had nothing to do with the issue of licences or the receipt of money, and their duty simply consisted in seeing that nothing was removed from the forests unless covered by a licence. An income of Rs. 34,000 collected within 9 months only, as compared with an income of less than Rs. 10,000 for the 12 months preceding the introduction of the new system, sufficiently proves the success of the new scheme from a financial point of view, and it has already been said that the people have been completely satisfied with the new arrangements.

24. For Nimar the system seems thoroughly suited, and it may admit of extension to some of the other districts in which the position of the Government Forest lands in respect to the cultivated area is similar. The matter will be referred to the local officers for consideration. Elsewhere the more simple commutation scheme, which has been adopted with the most excellent results in the Chuteesgurh Division, may prove more suitable. In Raepore and Belaspore the commutation was made with villages through the village head-men; and all villages drawing their supplies of forest produce from Government jungles have joined in the scheme. As in Nimar all the Government Forest lands were thrown open, but in place of the Nimar licence issued to the individual, there was in Chutteesgurh the engagement with the village head-man. The result in Raepore has been an increase of revenue from Rs. 14,000 to Rs. 15,000 and in Belaspore from a little more than Rs. 4,000 to nearly Rs. 8,000 One or other of these systems, with such local modifications as the peculiar circumstances of each district may demand, can probably everywhere be introduced, and the Chief Commissioner anticipates that the Government unreserved forests will in a few years yield a very much larger revenue than they do now.

25. In your para 136 you allude to some remarks made by Captain Forsyth, Deputy Commissioner of Nimar, on the disadvantages to the State from granting clearance leases, but this is not exactly what Captain Forsyth says. He expresses no adverse opinion whatever to clearance leases, but only adverts to the necessity of guarding against persons getting possession of land and clearing it of all wood and jungle produce on the pretence of taking a clearance lease but leaving the land, thus laid bare, without making any attempt to bring it under cultivation. The necessity of caution in granting clearance leases has always been impressed on Deputy Commissioners, and it is expressly laid down in the rules for the guidance of officers in granting clearance leases, that when a plot of waste land has on it timber or brushwood which is valuable or marketable from the position of the land, the Deputy Commissioner should demand some yearly payment from a lessee on account of forest products for the first three years of the lease, and in addition to this the Deputy Commissioner may take such security as he may deem sufficient for the due fulfilment of the conditions of the clearance lease which relate to the breaking up and cultivation of the land.

26. The financial results of the year are thus shown:—

		Credit.		
Cash receipts	Rs.	3,81,783	10	8
Timber in stock	„	3,04,854	5	3
Outstanding debts at close of year ..	„	3,33,268	4	5
Total	Rs.	11,19,906,	4	4

		Debt.		
Stock	Rs.	3,23,701	6	4
Outstanding debts	„	2,48,823	15	9
Expenditure	„	4,73,189	2	1
Balance in favor	„	74,191	12	2
Total Rs.		11,19,906	4	4

These results cannot be looked upon as satisfactory. Much of the work on which the Department was engaged during the year was not of a remunerative nature, but in addition to that, the necessity of reducing the estimate of the value of timber in stock has decreased the assets of the department very considerably. Rs. 47,000 were thus struck off the estimate and you remark that a still further reduction will be necessary. The Chief Commissioner trusts that after the final classification of the stock of timber in the Western Division is accomplished, the uncertainty which evidently attaches to these timber estimates may cease to characterize them.

27. The year has been one during which the time of the Forest officers of all grades has been very much occupied with preparing timber for sale and conveying it to certain appointed places for delivery to purchasers. Hence they have had less leisure for visiting the numerous forests under their charge and satisfying themselves regarding the conservancy and other important points of forest management. With the present staff of forest officers, the Chief Commissioner believes it is quite impossible to expect that the interests of all the forests which have been reserved and placed under the care of the department should be duly regarded. Much less can this be expected, if the forest officers are for the most part engaged in superintending timber operations. It appears to Mr. Morris that the time has come for re-organizing the department and re-distributing the forests, this re-organization and re-distribution being based on the experience of past years, which shows that the most practical and economical way of managing the numerous forests in the Central Provinces has not yet been discovered. At present the operations are too extended, the forest areas too large, and the distances which separate one forest from another too great, to enable the superior forest officers to exercise the necessary supervision over their subordinates. There are, the Chief Commissioner apprehends, too many reserved forests. In the Northern Division there are 8 reserves situated in the districts of Saugor, Dumoh, Jubbulpore, Mundla and Balaghat. In the Western Division there are also 7 reserves, covering an area of 2,000 square miles, situated in the Districts of Hoshungabad, Baitool, Nimar and Chindwara. It is impossible for the Officer in charge of these Divisions to visit every reserve during the year and satisfy himself, as he ought to do by personal inspection, that the forest system is being carefully observed and properly worked. Thus it happens that the Poonasa Reserve in Nimar has not been once visited by the Divisional Forest Officer since it was enclosed in 1866. This reserve has yielded no revenue to Government and is in no better condition than it was orginally. It is admitted that all our forests require rest and beyond removing fallen or decayed trees, the Chief Commissioner thinks no timber operations should be undertaken for some years to come. The number of reserves too, might probably be reduced. Many tracts were originally enclosed under the belief that they contained valuable timber, or gave promise of furnishing such timber in time ; a better acquaintance with these forest lands has shown that in several cases the hopes entertained were fallacious. Other reserves might perhaps be with advantage reduced in size.

28. Mr. Morris believes that many of the reserves, now under the nominal management of the Forest Department, might be made over to the District authorities who would make them yield a considerable revenue without in any way injuring the forests. Where necessary, special conservancy arrangements might be made in the case of particular forest tracts ; but the entire manage-

ment would be left to the District Officers, to whom the establishments attached to unreserved forests should be wholly made over.

29. The Chief Commissioner requests that you will take this important matter of the re-organization of the department into your careful consideration submit a special report containing distinct proposals, based on what has been stated in the preceding paragraphs.

30. In conclusion I am to say that the Chief Commissioner observes with pleasure the very favorable mention which you make of Mr. Thompson. To him, and to yourself for your zealous supervision of the Department during the year, Mr. Morris would offer his best acknowledgments.

I have the honor to be,

Sir,

Your most obedient Servant,

J. W. NEILL,

Officiating Secretary.

No. 290.

FROM

THE OFFICIATING CONSERVATOR OF FORESTS,

Central Provinces,

To

THE SECRETARY TO THE CHIEF COMMISSIONER,

Central Provinces.

Dated Nagpore, the 4th June 1870.

SIR,

I have the honor as follows, to lay before the Chief Commissioner the transactions of the year 1869-70 in this department, with their full details, and in so doing I shall follow a similar arrangement of headings and subjects to that adopted in the previous year's report, at the same time observing the orders conveyed in para 3 of the Chief Commissioner's review on the report for 1868-69, and make the introductory portion as brief as is consistent with the value of the information to be conveyed thereunder.

NORTHERN DIVISION.

Introduction, Statistical Data, &c.

2. Mr. R. Thompson, Deputy Conservator of Forests, conducted the duties comparatively without interruption during the year and has furnished a very voluminous report, commencing with a geological and general description of the physical character of the country, which as it contains much information of an interesting and varied class not hitherto recorded, I shall lay under contribution to such an extent as, in my judgment, I may do so with advantage.

Geological formation.

3. The formation, Mr. Thompson states, is a slate system not well defined, an argillaceous schist of hard texture intimately blended with sand-stone. These two combined with trap, which is very prevalent, produce and particularly in the north western portion of the Division, a rich soil of varied composition. The slate and sand-stone appear all through Saugor and Dumoh, and extend eastward in Jubbulpore until stopped, only to re-appear, at a short interval, by the low range of hills called Nagapahar. This range is trap, the chief feature of which is its nodular arrangement, and is possibly evidence of the first gradation of alluvial stratified rock sensibly affected by the vesicular trap beneath. The above in process of decomposition forms a reddish grey soil.

4. The clay system is apparently lost for a time on the south-east frontier of the district, but appears carried along the Kymore range, blending with the sand-stone of Jubbulpore and passing north-easterly beyond the limits of the Central Provinces.

5, In the south-east corner of Mundla and part of Balaghat, the uppermost rock is a dense heavy laterite which covers the plateaus of the Meikul range and its dissevered members north-west of the Nerbudda river. This is succeeded by trap dykes, overlaying gneiss, granite, and the finer sand-stone which characterise the lower valleys of the Meikul range.

6. The Sâl forests of the Meikul and Kymore ranges, are chiefly in situations where gneiss and granite prevail. Trap dykes intersect these situations and their course is marked by peculiar vegetation in which the absence of Sâl is a remarkable feature;—sections of trap are exposed in rivers and nullas and the erratic growth of Sâl is apparently due to the eruption, along the courses of which it does not prevail.

Natural products.

7. These consist of the various minerals known to abound. There is talc in Balaghat in course of being worked; Jubbulpore yields a valuable quality of sand-stone, and the famous lime-stone of Bheraghat; agates and all the compounds of quartz abound; jasper occurs of varied colour and density, but the organic products are those with which in this case we have most concern. The most important are the forests, the reserved portions of which have undergone no change which calls for notice in this Section, since the details of their condition were represented in last year's report, with exception of the Meikul range Sâl forests of which Mr. Thompson furnishes some local information acquired from his personal examination during our recent sleeper operations; but the information thus furnished, although evidence of Mr. Thompson's intimacy with locality, is not of sufficient value to insert it here with advantage.

Organic products.

Main lines of communication.

8. Taking Jubbulpore as a starting point the lines of communication are the roads leading to Dumoh and Saugor, Mirzapore, the Great Indian Peninsula and East India Railways, and the road *viâ* Mundla to Chutteesgurh, by the Chilpee Ghat. From the last, small fair weather roads have been led into the Sâl forests. They will long be cheaply mantained in an effective state, and now render the forests easy of access at various points.

9. The Nerbudda forms a most valuable artery, for export of timber as most of its tributaries flow from the most heavily timbered portions of the division. There are but two obstructions of consequence on the river between Mundla and Jubbulpore, the partial removal and improvement of which would be by no means expensive or difficult; but the demand for timber and other products must expand considerably before any extensive outlay on the improvement of the river, should be attempted, nor indeed would I advocate it at all with the same force as I should the completion of the road from Jubbulpore to Mundla.

10. Mr. Thompson very strongly urges the opening up of more permanent fair weather roads to the Meikul range forests, estimating that such, equal to the traffic likely to come over them, could be constructed for Rs. 80 per mile, and that such roads would certainly have the effect of making available with ease immense quantities of various forest produce, which without them yields little or no benefit to any one from its limited export. The construction of the road over the Chilpee Ghat need not affect or delay the connection of the forests with the outer world, and as Mr. Thompson justly observes, in such an instance want of communication entails loss of revenue.

Labour supply.

11. That this is not an obstacle to the progress of operations which cannot be overcome by the labour supply obtainable locally, supplemented by importing a moderate addition, I would instance as shown hereafter under its appropriate head, the work which has been accomplished, both in the year under review, and the previous one, and the following abstract of the means employed to carry out this season's work is corroborative of the above statement:—

Sawyers	904
Carpenters	498
Carts..	7,658
Draught Bullocks	15,373

From the above, 506 sawyers were imported from the Delhi and Goorgaon districts, and in addition large gangs of labourers were employed on road-making and miscellaneous work.

12. The unhealthiness of the forests was, as it has ever been, a great check to progress, which was only overcome by very great liberality, most excellent arrangements for medical treatment, and the greatest perseverance;—the high rate of sickness and death this open season proved beyond controversy the danger to foreigners of a too early entry into these forests.

First part, Special.—Head I.—Section 1.

Area, Boundaries, &c.

State forests.

13. This affords but small field for comment beyond what has been placed on record in past years, and, I feel satisfied, I need not put forward as a plea for not enlarging on the subject, the very slight variation that one year can produce in timber vegetation.

Exclusion of fire.

14. Fires have now been almost completely excluded from Jugmundel and Choohareegogur for three successive years, with what effect I must quote Mr. Thompson, not having had the benefit of a personal examination of those Reserves myself this season. He says, the results mentioned in para 286 of the Provincial Report for 1868-69, as observed by the Inspector General of Forests in Boree, are distinctly observable in the tracts named. However he confines himself to notice of the one result of the increase of seedlings, and then as I do myself, dissents from the adoption of the proceeding indiscriminately and indefinitely, without the operation can be put in practice under the peculiarly favourable circumstances of an advantageous situation and a less expensive system: than the entertainment of a regular cordon of watchers.

15. My idea is that, after five years successful exclusion of fire, unless some effect is distinctly produced which gives promise of the proceeding compensating fully within a given period for the capital invested, either from the large increase of plants springing up or the improvement of the growing crop, the experiment had better be abandoned, either leaving the regeneration of exhausted forests to be brought about in the natural course, or invest the same amount of capital in artificial planting over limited and more accessible areas; Mr. Thompson notes no alteration or improvement in other vegetation as the effects of exclusion of fire.

Jugmundel and Choohareegogur.

16. The boundaries of Jugmundel and Choohareegogur have been kept clear of all under growth, at an outlay of Rs. 1,274-5-9. This clearing is an auxiliary precaution necessary for exclusion of fire. I may record here an extraordinary incident which has added to the outlay for keeping this boundary defined by Rs. 155,—the visit of a wild elephant now for two consecutive seasons, which completely demolished twenty-five of the masonry pillars. I can vouch myself for the veracity of this statement as regards the cold weather of 1868-69. As my camp was quite close to the place, the neighbouring villagers showed me their corn stacks and gardens, the fences of which were torn down and the contents eaten and trampled, and I followed up the fresh trail of the animal for several miles, but without succeeding in overtaking it. At that season a wild elephant is very rare in the part of the country referred to, although their tracks in the wild parts of the Mundla district, made during the rains, are by no means uncommon.

17. This reserve has undergone no change since my previous year's report. The boundary has been maintained and its protective arrangements are sufficient.

Singrampore.

18. Beyond what was done but little more had been accomplished during the open season of 1868-69. But at date of the Divisional report for 1869-70, the erection of the permanent pillars had made good progress and the work will be completed this open season. The outlay on this demarcation was up to close of the year under report Rs. 677-3-9, and the length of boundary 14½ miles.

Burrailah.

19. Mr. Thompson furnished me with an excellent detail, in the early part of the year, of his examination and the then condition of this valuable tract. There are few particulars which have not formerly been recorded with exception of the condition and prospects of artificial plantation, the details of which will follow under that head. There were some slightly unfavorable effects noted from pruning done in previous years.

Gurrakotah.

20. The divisional Officer was unable to visit this reserve; consequently there is under this head nothing to notice in addition to former record.

Bijeragoghur.

21. As regards these forests, without maps nothing beyond the most vague description can be given. Mr. Thompson generalises on them at considerable length, but can convey or form no specific estimate of their contents or capacity; much timber which was killed in former years for resin and other purposes, has been utilised in sleeper making, but a vast quantity still remains, the removal of which Mr. Thompson speaks confidently of effecting with a prospect of profit. At present no well considered scheme of any magnitude has been matured, and I feel doubtful that the time has yet arrived for working these forests on an extended and profitable scale. The subject requires the greatest caution and deliberation, and, in my opinion, these forests must be worked departmentally, only as a last resource to procure the removal of the dead timber. Our system is too expensive and superintendence too diffused to admit of our meeting private individuals in open competition with fair prospect of success.

SAl forests on Meikul range.

22. Mr. Thompson notes that an enormous number of full grown trees have died from the effects of the unusual drought of the previous season.

Head I.—Section 2.

Requirements of population &c.

23. This section does not call for review at this stage of my report. The supply of all forest produce fully meets the demand, and prescriptive rights are fully recognised.

Head I.—Section 3.

Protection.

24. Nothing appears to me to be gained by entering into the details of the protective establishment and system, the principles of which continue the same as represented in 1868-69, with but some insignificant alterations. Breaches of Forest Rules coming to the cognizance of the department have been rare, fair grounds for assumption that the protective arrangements are effective.

25. There were 37 cases of breach of the Forest Act dealt with magisterially. of which there were convictions in 28 cases, and 9 acquittals,

Head 1.—Section 4.

Management and improvement.

26. Operations under this head were chiefly confined to improvement of growing timber in Gurrakotah and artificial plantation both there and at Ayree in Mundla.

27. At Gurrakota 5,973 trees which had perished from the drought of the previous hot season, were removed at an outlay of Rs. 112-10, and 24,827 teak trees at the same place, were effectively cleared of creepers and other obstructions to their growth, at a cost of Rs. 123. A considerable portion of the dead timber has been placed in depots, all of value, and carried to credit of stock, while the more worthless parts were sold as fire-wood, realising Rs. 127-8.

Gurrakotah plantation.

28. The condition of the planting operations was such that I could not present it in a favourable light in last year's report, since when if there are no actually improved results to detail, I can with confidence aver that under improved superintendence and the well organised footing upon which the work is now established, a success may be looked for from this open season's sowings. Three sites have been selected, each 1-20th of an acre, for nurseries and seed was sown in March, a well defined course having been adopted in doing so, in accordance with instructions which I prepared and issued on the subject in January last.

29. The detailed statement of the condition of the plantation at close of the year under report, shows that during the year 750 plants were put out, that the outlay for the year was Rs. 907-14-10, and that up to same date 6982 teak plants were then growing at a total outlay, since commencement of the experiment, of Rs. 1383-4-5, the area of land so planted being 15 acres, 2 roods, 15 poles, or 446 plants per acre. In addition to the above there are 2,000 seedlings and an area of 3-20th of an acre in which seed had been sown before the close of the year. To summarise, the cost of each plant alive at close of 1869-70 is about annas 10-3, or Rs. 289-3 per acre, for planting and propagation.

Ayree plantation.

30. Under para 111 of the report for 1868-69 it will be found that at close of that year 24,875 teak plants were then living, distributed over an area of 49 acres. I shall confine my remarks to teak as the other sorts of timber in course of propagation bear but an infinitesimal proportion to the teak.

31. During the year under report 7 acres, 1 rood, 33 poles, of new ground were brought under plantation, and a total number of 33,020 plants were put out. Of this number 8,557 were artificially raised seedlings, the balance spontaneously grown, 27,690 plants were required to replace those which had died, and the new ground as shown above received 5,330 plants. The outlay during the year was Rs. 4,399-13-2 and the actual condition of the plantation on close of the year stands thus :—

Plants alive—41,190, of which were, teak—38,991, and the total outlay from the commencement of the operation is Rs. 13,959-11-5. This is a fraction over annas 5 per plant, with an average of 726·40 plants per acre.

32. The amount of work done this year and its cost, contrast very favourably with that of 1868-69. This I attribute to the better supervision exercised

by Mr. J. McKee, Sub-Assistant Conservator, who succeeded to the charge of the work on the demise of Mr. Grahame, the European Forester of whose success at any point I was unable to make mention.

33. A fresh selection of more favourable situations both for nurseries and plantations has been made this year, and I feel I may with safety hold out prospects of increased results in future at a decreased rate of expenditure; a well defined and uniform system has also been established in all plantations, from which the exact cost per plant or per acre can be ascertained at any stage, and a more careful system of recording the rates of growth than that hitherto employed is also in practice.

34. The average height of 18 teak plants raised in July 1867, in three different plots at Ayree, is a fraction less than 3 inches, and the average girth of the same plants is about 2½ inches. The dimensions of the same number of plants raised in the succeeding year have also been most carefully recorded, but they vary very much, owing to many of the plants being those of spontaneous growth and ill-selected, while their growth is unusually backward from the excessive drought of the last year. A statement will be found in the Appendix, which represents in tabulated form the exact condition of all plantations at close of year.

Roads.

35. The repair and improvement of roads, although carried out solely in connection with the sleeper operations in the Meikul range Sâl forests may more appropriately be discussed under this section than any other, as although I do not wish to convey the impression that roads of a very permanent character have been constructed, yet large areas of forest have been made accessible for wheeled traffic by very effective lines during the fair season at a very moderate outlay. Rs. 9,530 have been expended over 165 miles, or an average of Rs. 54 per mile; of this sum Rs. 5,350 were expended between Jubbulpore and Mundla, which line although partially constructed in former years, had fallen into such a bad state of repair, as to be by far the most severe trial to the cattle and carriage employed in conveyance of sleepers to Jubbulpore. The work done included the construction of four large temporary bridges, and the general improvement of gradients and the surface, the two last involved an outlay of Rs. 80 per mile.

36. The other lines are strictly in communication with the forests and although their maintenance will always entail annual outlay, yet they come fairly under the head of works of improvement, and that of a well marked character, the performance of which although it absorbed a large share of the attention of the staff of the Division, in a measure to the prejudice of other operations, and was attended with heavy expenditure, yet must bear good fruit both in the interests of the State in the forests and the attendant benefit to the district.

Head I.—Section 5.

Yield and working of Forests.

37. I shall under this head first review the sleeper operations in the Meikul range forests, as being far in excess both in magnitude and importance of any other timber work in the Division. The fulfilment if possible within the year of the contract to supply 50,000 sleepers entered into in 1866, with the Great Indian Peninsula Railway Company, having been determined upon during the early part of the rains, a large cash allotment was made in addition to that already provided for in the Budget estimate, and as soon as the season opened the work was commenced with the utmost vigour. It was conducted chiefly by petty contract, but being on so much a more extended scale than that of former

years, the system admitted of a much higher and more liberal organisation. All details were most efficiently elaborated, and carried out with very great success under the supervision of Mr. R. Thompson, with but slight addition to his divisional staff.

38. A careful selection and registry of each tree felled was kept up, and a most clearly defined code of instructions with the system of check and control, was drawn up and strictly adhered to. The work was distributed into three divisions, the executive charge of the two larger of which was held by Sheik Moheaddeen, Assistant Conservator of Forests, the third and smaller being conducted under the superintendence of Mr. Seale, Sub-Assistant Conservator. A large and expert body of sawyers and carpenters was imported from Delhi and Goorgaon, for whom most efficient arrangements were made both to secure sufficient supplies of food and medical attendance. The resident population was also most fully employed and carriage was subsidised at liberal rates from the surrounding districts.

39. As soon as the season had sufficiently opened the repairing and opening of roads were commenced, and by the 1st of December every thing was ready for the commencement of carting out.

40. To enter into very minute details of each stage of the work would extend this report uselessly, but I take the opportunity of recording that Mr. Thompson has laid them most fully before me. I shall therefore confine myself to the following abstract which I hope is sufficiently comprehensive to convey the position of the work at the close of the financial year.

41. There were 4,450 trees felled which yielded 32,647 sleepers, the equivalent of 130,588 cubic feet of timber, or an average of 29 cubic feet per log, and it is calculated that this timber removed in log instead of being converted into sleepers, would have yielded 45 cubic feet per tree, or nearly half as much more than the quantity represented by sleepers.

42. There were 22,774 1st class sleepers landed at Jubbulpore by the 31st of March,—this included 6,644 which remained in depot from the year previous ; of the number delivered 5,392 were rafted down the Nerbudda from near Mundla. With the work at its full height, and without its complete close, so as to obtain adjustment of advances, and distribute the multifarious attendant charges equally, it is impossible to render an accurate return of the cost per sleeper landed at Jubbulpore ;—however, by approximate calculation, it will not exceed Rs 6. It will be observed that this figure is in excess of that for which it was found sleepers could be delivered in the previous year, see para. 124 of report for 1868-69. For this excess, I was quite prepared, and it is cause for regret that such loss of revenue should have been entailed solely because the Railway staff thought proper to make the non-fulfilment of this contract a screen against the reflections which the backwardness of their own operations and consequent delay in completion of the line cast upon them, it having formed a distinct clause of the contract that these sleepers should be delivered at our own time, on the equally distinct understanding that they were to be relied upon for maintenance not for construction. I will, however, do the Company the justice of saying that they made some slight amend, under strong pressure by advancing the price of the sleepers to such an extent as enable us to recover Rs. 5-12-1 per sleeper, instead of the original price contracted for of Rs. 5-4-0.

43. The construction of sleepers had ceased by the end of the year, and on the completion of delivery of the whole number of sleepers constructed, the transaction will be closed and the accurate results recorded.

44. As promised in para. 129 of last year's report, the whole of this timber has been made over to the Executive Engineer at Jubbulpore, to the extent of, within the year 410 logs, cubic contents 3,215, but owing to some discrepancy in the account of the cash advances the transaction has not been fully adjusted; however it shall be with all practicable despatch;—details of the year's outlay have not been furnished.

Sal timber for Department Public Works.

45. I shall now proceed to review the ordinary timber trade of the division.

46. Here is the only place where teak was felled during the year, and that was only to save timber which had perished from drought from waste and loss. 5,973 dead trees of all dimensions were felled, of which 1,951 pieces were placed in depot, but the greater part of the timber was of inferior quality and most of the refuse pieces was disposed of to the best advantage as firewood and for other purposes.

Gurrakotah timber Depot.

47. With the above exception and the quantity of sleepers constructed during the year, the timber stock received no addition. 611 teak logs were transferred from outlying depots to Goareeghat, 410 similar pieces of teak were landed at different places along the Nerbudda, having broken adrift in rafting, and 96 logs, valued at Rs. 4,642 drifted away and are written off.

48. 1,595 pieces of Sál of the 2nd class although returned in depot at Suckreeghat, have reached the Goareeghat depot at Jubbulpore, but unfortunately not in time to be returned within the year.

49. The sales of timber only realised Rs. 8,904 for 4,660 cubic feet, exclusive of 21,698 sleepers passed by the Railway staff as of standard quality, the value of which was Rs. 1,21,912.

50. The ordinary timber trade shows a large falling off as compared with past years owing to, as I need not explain, the limited demand consequent on the suspension of large imperial works.

51. The transactions of the year may be summed up as follows:—The total amount for the year, inclusive of all charges for work, collection, pay of establishment and contingencies with value of stock on hand, is Rs. 4,05,778-12 to debit, while to credit appears, inclusive of value of stock on hand at close of the year, consisting of timber and sleepers, the large sum of *Rs. 3,50,257-15-4, from which, if we deduct the revenue of unreserved forests, Rs. 2,01,096-7-0 remain to credit of departmental agency.

Epitome of cash transactions.

52. This I make no attempt to disguise is a most exceptional result, but yet reflects the very greatest credit upon the members of the staff through whose exertions it ensued, on which point I shall reserve further notice for another section.

Heads II and III.

Unreserved Forests and village and private Forests.

53. These heads shall be dealt with hereafter collectively, not by divisions, but a comparative statement of receipts and charges for the past three years will be attached to the separate review of each division which will convey a fair idea of progress.

* The sum of Rs. 3,50,257 for which credit is taken, is exclusive of Rs. 1,00,984 price of sleepers accepted by Railway Company, of which a large amount was paid in since close of the year, nor does it include Rs. 1,03,298, an item which comes under assets being cash advances on work in progress.

Statement of Receipts and Charges of Northern Division for the following years.

Years.	Unreserved Revenue.	Reserved Revenue.	Total.	Charges.	Surplus.	Deficit.
1867-68.	51,921 14 6	32,022 7 7	83,944 5 1	48,069 2 0	35,875 3 1	..
1868-69.	67,061 2 10	40 249 0 8	1,07,310 3 6	95,739 14 8	11,570 4 10	..
1869-70.	59,161 8 4	35,964 5 9	95,125 14 1	2,70,011 15 4	..	1,74,886 1 3

Central Division.

Introduction.

54. The part of the country comprising this charge is so familiar from previous description of its general characteristics and condition, that to attempt an introductory notice of it here, would only be a recapitulation of former records, and would involve unnecessary waste of time in its preparation. The operations under direct departmental management are chiefly in connection with the final delineation and administration of the Sathpoora Reserve, the progress of which I shall therefore proceed to exhibit, as well as to notice the condition and prospects of the artificial planting, and afterwards review the management of unreserved forests under the section set apart for them.

Head I. Section 1.

Area, Boundaries, &c.

State Forests.

55. The tract designated the Sathpoora Reserve is situated partially in the districts of Seonee, Chindwara and the northern portion of Nagpore. There is also almost connected with the Sathpoora Reserve, another tract extending into Chindwara, and known as the Deoghur Reserve.

Sathpoora Reserve.

56. The extreme length from east to west is about 80 miles. The surveyed portion contains a fraction over 356, and that unsurveyed is estimated at about 100 square miles. The whole area is timbered with the usual growth which generally abounds in these Provinces, but timber of large dimensions has been almost completely exhausted and the tract has been reserved chiefly to allow of natural regeneration and in anticipation of the demand for forest produce generally, which must attend the advancement and rapidly extending cultivation of the adjacent country, as well as with the expectation of the valuable production of teak which grows freely and indigenously but as yet of but small proportions throughout the whole tract.

57. Considerable progress has been made towards the rotation management of the forest, a portion of it having been completely closed against wood cutters, the annual minor produce being made available to the public, both as a source of revenue to Government and because its removal is productive of no disadvantage to the forest, while prevention would be productive of hardship to the labouring and agricultural classes in the vicinity. Where surveyed a well defined block system is established, with a regular record of the areas of certain blocks, the usufruct of some of which is annually let; while during the year under report some others have been selected as a favourable situation for the exclusion of fire, and a more strict system of protection, and as the

survey progresses, the system will be gradually extended over the entire area. This may be reckoned upon within the year 1870-71.

58. In the portion of the tract east of the northern road which is now open to the public, a well defined boundary line is kept cleared,—the length of this line is 157 miles, of which 77 miles have been completed during the year under report,—867 small masonry pillars have been erected to preserve the survey stations, and 24 larger ones to define the main boundary and the limits of blocks.

59. In the portion west of the same road, 10 miles of the boundary lines have been cleared in the year, and as circumstances admit, the construction of the boundary marks will be proceeded with. The process has been tedious, but now gradually assumes an established shape, which will within a short time secure an easy and systematic management of the forest.

Deoghur Reserve.

60. The demarcation of this tract is not sufficiently far advanced to enable me to give a detailed description of it, but I append a sketch map of its outline which shows the extent of boundary laid down, cleared and surveyed. This within the year was 70 miles, the total length is 150, and the area of the tract is 190 square miles. A survey of the tract has been in progress under departmental superintendence this open season.

Head I.—Section 2.

Requirements of population, &c.

61. These are fairly provided for by the system of leasing certain privileges which are regularly defined at the time, and these privileges are chiefly secured by the neighbouring land-holders for the benefit of themselves and their tenants, not by speculators.

Head I.—Section 3.

Protection.

62. A considerable increase has been temporarily made to the strength of the fixed establishment, both for protective purposes and the exclusion of fire. This increased establishment must eventually become permanent, but until the test of experience proves to what extent it will be necessary, it is preferable to maintain it as above and make annual provision for the outlay in the budget.

Breach of Forest Act.

63. There were 86 cases, for which 101 persons were convicted and 25 acquitted, 3 cases remaining undisposed of at close of year.

Head I.—Section 4.

Management and Improvement.

64. The eastern division has been divided into 42 blocks the limits of 20 of which have been accurately defined, both on the ground and on a map scale 4"=1 mile, which latter displays in addition to the boundaries, all the natural features of the country, thus rendering decision easy as to the localities under rotation.

Plantation.

66. This branch of duty did not in previous years commend itself sufficiently to the attention of the Officers in charge of the Division to secure such results as might be desired, and

the sowing season had past before I had an opportunity of impressing upon the Assistant Conservator the necessity for extension of artificial planting on a better and larger system than that hitherto adopted, so that there is not much progress to detail as the work of the year.

66. Reference to the tabulated Statement in the Appendix will show that only 1½ acre was planted, making up the area so being treated on 31st March 1870, to 6 acres, 1 rood, 20 poles, which contains 5,293 teak plants raised at a total cost of Rs. 1280-9-5, or about annas 3-10 per plant. The proportions of these vary from 1 to 6 feet in height and 1 to 6 inches in girth ; but the details are not furnished with sufficient accuracy to enable me to judge of the average.

67. Large areas have been placed under preparation for nurseries and plantations, and seed was sown at date of the divisional report, but the extent of the land and system of operations have not been laid before me by the Assistant Conservator.

Head I.—Section 5.

Yield and working of Forests.

Epitome of transactions of the year.

68. This is confined to the negotiation of usufruct privileges and realization of revenue therefrom. The system pursued consists of leasing the rights annually at a regular tariff, which does not call for a minute discusion of its details here, and the transactions of the year may be summarised as follows. To the debit of the division stands Rs. 23,786, being value of stock on hand, charges for work establishment and contingencies. The credit side shows by revenue:—

Stock in hand ..	...	Rs. 1,885 - 0-0
From reserved forests ..		„ 13,249-15-6
From unreserved forests ..		„ 60,456-12-3
	Total	Rs. 75,591-11-9

69. This does not contrast favourably with either the receipts or charges of two past years which are embodied in the following statement, and I confess to feeling unable to advance any satisfactory explanation for the decreased results, but the increased charges necessarily ensue from the advanced stage of management of the Reserve and the expenses of demarcation and division.

Statement of receipts and charges of Central Division for the following years.

Years.	Unreserved Revenue.	Reserved Revenue.	Total.	Charges.	Surplus.	Deficit.
1867-68.	77,642 14 0	19,076 10 7	96,719 8 7	17,277 5 2	79,442 3 5	...
1868-69.	65,305 6 3	10,981 15 10	76,287 7 1	19,656 10 3	56,630 7 10	...
1869-70.	60,456 12 3	13,249 15 6	73,706 11 9	21,901 2 4	51,805 9 5	...

Western Division.

Introduction.

70. I regret again to be compelled to report that this Division is again subject to the disadvantage of another change of its chief Executive Officer.

Captain Jarrett, Deputy Conservator of Forests, assumed charge of it in July last, and only held it until the following February when bad health forced him to seek a change to Europe. Owing to the constant changes in the staff, and inefficient control, the whole system of the Division had lapsed into confusion, the responsibilities of establishments were wholly undefined, the progress of operations was rather retrograde than otherwise, and whether from his failing health or other causes, Captain Jarrett did not, during his tenure of office, accomplish as much towards the better organisation of affairs as on his transfer was expected.

71. The circumstances of the Division of which I had a most excellent opportunity to form an opinion by personal observation during a prolonged tour through every part of it, much in company with Captain Jarrett, fully justify me in making the above statement. The staff was ample to conduct the duties had it been well distributed, and under a fair division of responsibility would have been more efficient, to secure which and improve the system and conduct of operations, I took every possible precaution as each came under my notice.

72. Since Captain Jarrett's departure, Mr. Webber, Assistant Conservator of Forests, lately transferred from the North-Western Provinces, assumed charge on the 25th February last, and notwithstanding that he laboured under the difficulties above represented, with a most imperfect record of the proceedings of previous years, and that the short interval between the date of his assuming charge and the close of the official year, admitted of his gaining but a deficient local knowledge of this very extensive Division by personal observation, yet I feel it no less than his application entitles him to, to place on record that he has furnished me with a most excellent report, in which he conveys a most clear detail of the progress of operations during the year with their condition at close, and a valuable description of the Reserved Forests with rough sketch map showing their situations, annexed hereto, and virtually he has furnished the fullest and first valuable description of the Division and its operations which I have been able to find on record.

Statistical data.

73. The total area of Forest Reserve in the Districts of Hoshungabad, Baitool, Nimar and part of Chindwara which comprise the Western Division is about 2,000 square miles, and the proportion of timbered country, not including land conferred in proprietary right, stands as shown by Settlement records at 4·8 acres per head of the population, or 3·9 acres exclusive of the forest under reserve. This is a high ratio as compared with the continent of Europe, as in Germany the highest area is 1·31 acre per head, and by estimate the growing timber of the Western Division may be put down as one-half the yield of Germany relatively to the consumption.

74. A rough sketch-map showing the situation of the Reserves is appended, which in the absence of a more accurate one is useful.

Market value of timber.

75. This is a difficult point to ascertain and fix, as the local demand for teak is for that of small dimensions, while that of large proportions is scarcely obtainable. Burmah teak and other valuable foreign timbers are procurable in Bombay for Rs. 1-4 per foot, and the cost of delivery at any point along the line of Railway would not increase the price by more than annas 4 per foot. Consequently the rates fixed formerly for the timber of this Department in the Nerbudda valley, which varied from annas 8 to Rs. 2-8, cannot compete with the above with much prospect of success, and much of the timber stock being of inferior quality, I consider quick sales at lower prices will secure a better profit than retaining the timber in hopes of increased demand, it being all the while subject to most rapid deterioration.

First Part special.—Head I.—Section 1.

Area, boundaries, &c.

State Forests.

76. The State forests consist of:—

		Area.
Rajaboraree and Kaleebheet in Hoshungabad ..	...	618
Bowerghur, Sowleeghur and Kaneepoor in Baitool	..	1,112
Poonasa in Nimar	..	141¾
Boree in Chindwara	...	62
With the leased Forest of Delakaree in Chindwara	..	100
Total square miles	..	2,033¾

77. The tabular Statement in the Appendix exhibits the condition and progress of the demarcation of these forests, but as yet, in consequence of the complete exhaustion of the better classes of timber in all the above forests with the exception of Boree, many years must elapse before any regular system for working them with profit can be prepared, although the fact of the forests being, as above stated, completely cleared of valuable timber, is none the less reason that the system of their protection and regeneration should not be all the more highly organised.

Head I.—Section 2.

Requirements of the population.

78. The surrounding country meets these amply as regards minor forest produce and the unprohibited sorts of timber, and although the area is large over which the cutting of timber of the more valuable classes is strictly prohibited, yet I do not consider that it is productive of inconvenience to the population, the chief ground for complaints being, so far as I am aware, against the high grazing rates which are as much as Rs. 25 per 100 head of cattle in the Reserves.

Prescriptive rights.

79. I believe all rights have been respected and annual leases in a form to guard against the acquiring of title under any circumstances within Reserve limits, will be duly executed in a uniform manner in all reserved forests in the Administration,—I mean as regards squatters whose residence is advantageous and who are treated as tenants-at-will of the Forest Department.

Head I.—Section 3.

Protection.

80. As I before observed, the constant changes of control to which the Division has been subject have had a most prejudicial effect on the establishment of a well-defined system of protection. The establishment is in my opinion sufficient for the purpose and has been employed in a general supervision of the forests and rather extensive timber work.

Exclusion of fire.

81. Up to close of the year the exclusion of fire from Boree had been successful. This is now the fifth successive year. The growth of seedlings and luxuriance of vegetation have doubtless increased, but I could not observe any alteration in the character of the grasses or under-growth, nor have I anything to advance on the subject beyond what I expressed in my report for last year.

Breach of forest rules.

82. There have been only 12 prosecutions in the Division, of which there were 5 convictions.

Head I.—Section 4.

Management and improvement of Forests.

83. The backwardness of the topographical surveys reflects itself on the progress of that first essential to forest management, valuation surveys, but there are good grounds to expect that in the coming year something in this direction will be accomplished, at all events in Rajaboraree and Kaleebheet, when, and not before, a regular plan of operations can be matured and the restoration of the forest fairly promoted.

Boree Reserve.

84. Shortly before the close of the year, the sub-division of this forest was commenced. It is already divided into two divisions, north and south, by a pathway which leads from Puchmurree in a westerly direction. The project is to divide the forest into 10 blocks, which will form the foundation of a hundred years rotation, but until a survey and map have been made, the regular details of the scheme cannot be drawn up. These operations shall form the first object for attention next open season, during which, I hope, without being over sanguine, to see them completed and the plan of operations in progress.

On this shall follow a similar proceeding in Bowerghur as the next most suitable forest, and thus I hope gradually to bring each reserve under systematic management, their demarcation having now approached completion, and the principles which prevail in Germany are those proposed for adoption.

Plantations.

85. Operations of this nature, on anything of a successful scale, are confined to Bankahurda in the Bowerghur forest. The situation is admirably adapted for artificial planting, being in the valley of the Machna, an affluent of the Towa, which is crossed by the Great Indian Peninsula Railway at Bagra. The distance by water is about 70 miles and thus timber can be landed at the railway by the cheapest known carriage.

86. The plantation is also accessible to wheeled carriage, or the timber can be rafted to a place called Shapoor, on the road from Baitool to Hoshungabad, distant from Etarsee another railway station 38 miles, to which a good fair weather road runs. At the close of the year, there were 18,418 teak plants, distributed over four detached plots of irregular shape, the area of which is between 40 and 50 acres; the plants are of four, two, and one year's growth, the latter being the larger number. The system pursued was to raise seedlings in nurseries during April and May and transplant them during the rains.

87. Although the operation has been attended with success and the prospects are very promising, yet the work was not carried on on such a well-organised principle as to enable me to furnish very accurate details of the average cost. The gross expenditure to the close of the year was Rs. 7,866, or annas 6¼ per tree. This average might have been much lower and the condition of the plants equally good, had expenditure not been incurred upon work which was by no means essential, but the attempt having now passed its tentative stage, a less expensive method will be adopted.

88. The even growth and luxuriance of the plants are strong evidence of the suitability of the situation, but whether this is consequent upon the soil, climate, or aspect, or the general combination of all, I am not prepared to say. The four-year-old plants are now a regular average of eight feet high, and in last December I measured several raised from seed sown in the previous April, which had not been removed from the nurseries and were then five to six feet high, with circumference at the surface of the ground of four inches, and one plant had grown as high as seven feet, with a girth of slightly over seven inches.

89. Arrangements are in progress to clear and plant the intervals between the plots so as to have uniformity of area; a more regular series of books and registers has been opened, and a simple system of recording all results, with rates of growth, so that in future the fullest details can be obtained; and Mr. Webber displays the fullest consciousness of the necessity of conducting the work on more economical principles than those hitherto prevailing. The tabulated Statement appended exhibits the details.

Creeper cutting.

90. The killing of creepers and removal of superfluous growth of inferior sorts has made some progress in the Boree Forest, and was being pushed on vigorously under the superintendence of Mr. Davidson, the trained forester.

Puchmurree garden.

91. Operations on the Puchmurree plateau, although they were continued during the present and previous years, were not noticed in the report for 1868-69, insufficient information having been furnished. The last mention of them in the form of the Administration Report for the year will be found in paras 76 and 77 of the report for 1867-68. The project was originally experimental Cinchona cultivation, but with this an enlarged attempt to raise other products became gradually combined, much to the prejudice of the experiment to grow Cinchona. From this circumstance and generally defective management, the Cinchona plant died by degrees and attempts to propagate it from seed, cuttings, and layers not proving successful, the work was discontinued under this department just before the close of the year.

Communications.

92. The road from Delakaree to Bunkery which was marked out some years ago, was repaired this open season at a cost of Rs. 930 and much facilitated the delivery of sleepers from that forest. A trifling outlay was also incurred in the improvement of another line, for the same purpose, from Ruttenpore in the Kaneepore reserve, but as timber work must, in future, for some time, be carried on an a much more limited scale than heretofore in this Division, the condition of roads is not a question which calls for extended notice.

Head I.—Section 5.

Yield and working of forests.

93. During the year the working of the forests has been on a very reduced scale, and the yield is chiefly the result of previous years' operations. Paras 278 to 283 of last year's report detail the condition of the timber stock as represented to me, and when writing that report I had no other alternative but to accept the details as laid before me. An inspection of the Division during the open season, however, gave me a different estimate of the stock and its value to what is conveyed in the above quoted paras, and I shall now proceed to represent its condition and the means taken to obtain a more accurate return of the timber and its valuation.

Sleeper work

94. There has been no felling of timber, and operations were confined to the removal of logs from the forests and the construction of sleepers. At close of 1868-69 there were 12,116 sleepers on stock, and during the year this number has been increased by 6,965, making a total of 19,081, of which 11,448 were delivered at an outlay for carriage, repairs to roads and extra establishment, of Rs. 14,589-3-2; of the above 4,627 were rejected by this and the Railway Departments. The average of cost of delivering by approximate calculation is Rs. 1-14 per sleeper, and a balance of 3,006 sleepers remains on hand, which, if not accepted by the Railway Company, have been ordered to be disposed of to the best advantage, as although a proportion of them is unfit for the permanent way, yet the timber will prove useful for other purposes.

95. The total value of the sleepers accepted is Rs. 65,566, of which unfortunately only Rs. 5,864, were realised in time to appear in the accounts of the year, but since its close I have received intimation of the payment in full, as also the price of 756 accepted just too late also to appear in the year's transactions.

Timber stock.

96. As before observed, I found on personal examination that the timber stock had deteriorated to such an extent as must reduce its previously estimated value. The closing stock balance for 1868-69 was 19,208 pieces, to which 613 more were added during the year. Hitherto the custom prevailing was for darogas to return the contents and classify the timber, and much of it having been collected at out-of-the-way places, in consequence of the repeated changes in the controlling staff, but little of the timber came latterly under the inspection of the Divisional Officers, nor were arrangements made for its collection in main depots, where, if not sold, it could at least be protected, in a measure, from the weather and other injurious influences.

97. I therefore deputed Mr. Condon, a promising Officer of the junior grade, to survey and classify the whole stock of the Division. This was most efficiently performed in the depots of five Reserves, the stock of which was returned at 14,080 logs, valued at Rs. 74,799-14, and proved to have suffered so much from decay as to necessitate the rejection of 3,366 pieces and a reduction of the value to Rs. 37,332-4, or by a little more than half.

98. A careful classification and measurement of the timber has been made and the stock registers will be corrected in accordance.

99. The main depots are established along the line of railway, at six points from which the various minor depots in the forests are most easy of access. To these will be conveyed only such timber as will either from its quality command a ready sale at fair rates, or bear storage for a reasonable time without excessive loss.

Epitome of cash transactions.

100. In consequence of the re-survey and valuation of the timber stock before referred to it is difficult to summarise the condition and results of the Division.

101. The opening balance of stock consists of 19,208 pieces of timber and 12,116 sleepers, the whole valued at Rs. 1,82,564; this during the year was increased by 613 pieces of timber brought from the forests, and 6,965 sleepers, the total value of which is Rs. 33,499. The charges under all heads amount to Rs. 88,470, this represents the debit, and on the credit side we have revenue from :—

Reserved forests...	...	...	..	Rupees	15,066
Unreserved do. ...	..	...	...	„	77,644
				Total Rs.	92,710

102. The stock account now represents the following reductions by 238 pieces of timber sold ; pieces of timber converted into sleepers 1,002; pieces of timber rejected as worthless, 3,366; and reduction of value of the stock of those depots re-surveyed by Rs. 37,477. Consequently the closing balance is 15,215 pieces of timber containing 107,984 cubic feet, 3,006 sleepers, the value of the whole being Rs. 94,413. This will not bear favourable contrast with the previous years' returns in aught except its reliability.

103. The following statement exhibits the receipts and charges for the last three years.

Statement of Receipts and Charges of Western Division for the following years.

Years.	Unreserved Revenue.	Reserved Revenue.	Total.	Charges.	Surplus.	Deficit.
1867-68.	43,616 11 1	27,385 10 10	71,002 5 11	68,481 10 2	2,520 11 9	... ...
1868-69.	38,795 1 5	49,252 15 9	88,048 1 2	89,614 11 4	... ...	1,566 9 2
1869-70.	77,644 5 9	15,066 14 3	92,711 4 0	88,470 3 0	4,241 1 0	... ...

EASTERN DIVISION.

Introduction.

104. This must of necessity be brief, as the general situation of the Division and the remoteness of the more valuable areas of forest and various other circumstances all combine to narrow the sphere for operations. The charge was held during the greater part of the year by Mr. Foster, Sub-Assistant Conservator, who has conducted his duty most satisfactorily, and the small results obtained can in no way be ascribed to any want of diligence on his part, but simply to the fact that the time has not yet arrived when the large timbered areas of this Division can be worked remuneratively.

Head I.—Section 1.

Area boundaries &c.

105. There is nothing to add to what was recorded in last year's report on this subject, when it was represented that the demarcation of such tracts as were in a position to be reserved had been completed, and the only forest which can fairly be classed under the second portion of this section is Panabaras. Here, beyond the removal of timber formerly felled and the enumeration of the growing stock upon which an estimate has to be formed of the value of the forest as a basis to frame the terms under which Government can occupy it, no operations were undertaken.

State Forests.

Leased forests.

106. The results of this enumeration having been laid before the Chief Commissioner in full detail, a summary of them will I trust be sufficient here. The area upon which the timber was found worthy of classification is 5,823 acres. This was marked off into four Divisions, which were again sub-divided into 43 blocks varying from 150 to 200 acres each. The timber was then counted and distributed into four classes. That of the 1st and 2nd class proved to be respectively 1 on 3⅜ acres and 1 on 2 and 1-7th acres;—the ratio of the other two classes was much larger. The entire classified stock proved to be 55,300 trees on the whole area of 5,823 acres, or within a small fraction of 9½ trees per acre.

Enumeration of growing timber in Panabaras.

107. From experiments the approximate proportion of unsound trees was ascertained to be as follows:—

1st Class	...	66·66 per cent.
2nd „	..	72·22 „
3rd „	...	27·54 „
4th „	...	8·33 „

108. This does not necessarily prove that decay increases with age, but is evidence of the almost complete exhaustion of the valuable timber by previous felling.

109. Experiments to test the rate of growth were extensively made by felling the whole of the trees on selected average acres and counting the rings. This does not yield accurate or reliable results, but in the case under notice the growth was calculated to be 2·42″ in 10 years, and that if all 3rd class trees were 18″ in girth at 6′ from the ground, the restoration to a first class forest would occupy 50 years.

110. The whole of the boundaries are cleared and distinctly defined, so that the forest presents a most favourable field for professional management. The length of these lines is 57¾ miles, and the total expenditure on the demarcation, classification and experiments amounts only to Rs. 1,222-11-10.

Head I.—Section 2.

Requirements of population.

111. Calls for no remarks at this stage.

Head I.—Section 3.

Protection.

112. No alteration has taken place in the system pursued in former years. There were six cases of breach of rules prosecuted, and in all 6 convictions were obtained.

Head I.—Section 4.

Management and improvement

113. This has been confined to the exclusion of fire from the Hathibaree forest, the cutting of creepers and removal of useless sorts of timber where it checks the growth of the more valuable classes, and the extension of the forest by artificial planting. The first operation has not been sufficiently long in practice to produce any observable effects, the second and third have been carried on extensively, but their effects must not yet be looked for.

Plantation.

114. At close of 1868-69, there were 75 beegas of land under plantation, containing 33,911 plants; during the year there were 115 more enclosed, into which 55,626 seedlings were transplanted. This gives a total of 85,993, and the deaths are returned as only 3,545; but the statement shows only 52,081 plants alive at close of the year under report. There is evidently an error, but unfortunately I cannot have it corrected in time to appear herewith.

115. I visited the plantation just before the close of the year and did not find the trees of such level growth as those in other plantations, however the general condition was good, and taking the outlay from the commencement up to close of the year under report as Rs. 5,025, we have for this 52,081 plants then alive at an average cost of annas 1½ per tree. Some trees measure as high as 9 feet with girth of 3 inches, but until late in the year the system was not established on such well organized principle as admitted of the furnishing of accurate details. These may be looked for in future.

Head I.—Section 5.

Yield and working of forests,

116, There have been fifteen logs, previously girdled, felled at Hathibaree, and 68 others lying in the forest, removed into depot. With this exception, the only alteration in the stock on hand is caused by loss by fire, and transfers from one depot to another. There were no sales effected,

117. 103 logs were conveyed from Panabaras to the Baghnuddee depot on the Eastern road, and in September 285 logs containing 8,685 cubic feet were rafted down the Baghnuddee with the intention of leading them to Bhundara. This was much too large a quantity of timber to try as a first experiment, and the consequence was that after infinite labour the rafts only reached within 35 miles of Bhundara. However the outlay was comparatively trifling and averaged only annas 6½ per cubic foot, a sum for which the timber could certainly not be conveyed by road.

Epitome of cash transactions.

118. The opening balance of stock exhibits 812 pieces Sál and 376 pieces Teak, and the total of the charges, with value of stock on hand as above, Rs. 50,569.—The credit consists of stock

on hand	Rs.	35,698
Income	„	53,519
Total Rs		89,217

Statement of Receipts and Charges of Eastern Division for the following years.

Years.	Unreserved Revenue.	Reserved Revenue.	Total.	Charges.	Surplus.	Deficit.
1867-68.	24,433 10 0	2,907 3 0	27,340 13 0	19,387 6 3	7,953 6 9	... .
1868-69.	18,472 15 1	.. .. ..	18,472 15 1	19,001 15 11	... .	529 0 10
1869-70.	52,967 14 1	551 8 8	53,519 6 9	25,143 7 1	28,375 15 8	... .

SOUTHERN DIVISION.

Introduction,

119. When I state that the operations of this charge under departmental control were quite confined to the enumeration of growing stock and the collection of timber in depot from the Aheree Forest, and as there does not seem to me to be field for operations of another character in the Division, it will, I trust, be sufficient plea for brevity and for my commencing my review at the fourth section of the first head of the first part special.

Head I,—Section 4

Management and improvement,

State and leased forests.

120, The stage to which the survey of the tracts and classification of timber had reached in 1868-69, was shown in paras 249 and from 254 to 257 of the report for that year. Since then, both the survey and the preparation of maps, the enumeration of timber, and experiments to ascertain the rates of growth and decay, have been all brought to a close, the results of which I shall endeavour to convey as concisely as possible, each operation having previously formed subject for special communication,

Bemaram forest.

121, This contains an area of a little over 19 square miles in five Divisions, which are again sub-divided into 66 blocks of from 200 to 300 acres each. The returns show that by actual enumeration in 56 blocks, and estimate of the remainder, there were 2,54,482 teak trees of all classes on the whole area, and the average per acre is—

1st Class teak	4 ·82
2nd „ ...	3 ·73
3rd „ ..	7 ·5
4th „ ..	5 ·82
or total of all classes	20·69

122, Sheshum on the same area and same enumeration stands 58,685 of all classes, or average per acre,—

1st Class	Sheshum	·20
2nd	„ ..	·58
3rd	„ ...	2·76
4th	„ ..	1·13

Total average per acre 4·77 of all dimensions,

123. The registers show the ratio of sound to unsound teak to be 3 to 1, and that of Sheshum is a fraction more than 4 to 1,

Mirkulloo forest.

124. Here the area is 8,479 acres, in five divisions and 72 blocks. By actual enumeration there prove to be 89,902 teak trees of all classes, which gives an average per acre—

1st Class	Teak	1·85
2nd	„ ..	2·29
3rd	„ ...	3·70
4th	„ ..	2·74

or an aggregate average of 10·60 per acre all round,

125. Sheshum on the same area, by the same enumeration, stands at 23,683 trees of all classes, giving an average per acre—

1st Class	Sheshum	·26
2nd	„ ...	·43
3rd	„ ...	1·10
4th	„ ..	·98

or an aggregate of 2·79 per acre.

126. The proportion of unsound teak has been calculated not to exceed 40 per cent.

127. I offer no details of the experiments to ascertain rates of growth and decay. They were carried out and the results are duly recorded, but I have not sufficient confidence that the facts so collected give a true representation of the progress of either growth or decay, to care to enlarge upon them here.

Head I.—Section 5.

Yield and working of forests.

128. Again, no timber has been felled, and the work has been confined to the collection of logs previously felled, their removal into depot, and measurement. A small quantity of timber—266 logs—was delivered in Nagpore, which was considered sufficient to test the demand and expense of delivery. The former has not proved sufficient to justify a continuance of the carting, and it has been proved that timber of moderate dimensions can be sold at Rs, 2-2 per cubic foot and leave a small margin after recovery of all charges.

129. Convenient depots on the outskirts of the forests have now been opened, as much of the timber previously shown on stock was collected in the forests, and accurate measurement and classification are in progress,

Epitome of cash transactions.

130. The opening balance of stock is 35,957 cubic feet of Teak, and 694 of Sheshum, valued at Rs. 27,488, This with charges incurred for establishment, conservancy, working, survey and classification, total Rs. 67,622, represents the debit side.

There were no receipts of timber during the year, and the credit side of the books exhibits as follows:—

Value of stock	Rs.	37,091
Revenue from unreserved forests	„	64,668
Reserved forests	„	2,052
Total Rs. ..		1,03,811

Statement of Receipts and Charges of Southern Division for the following years.

Years.	Unreserved. Revenue.	Reserved Revenue.	Total.	Charges.	Surplus.	Deficit.
1867-68.	68,571 14 9	1,912 10 0	70,484 8 9	58,883 10 5	11,600 14 4	... .
1868-69.	58,777 7 5	2,117 10 2	60,895 1 7	70,641 7 11	.. .. ..	9,746 6 4
1869-70.	64,668 2 7	2,052 3 6	66,720 6 1	67,662 6 4	.. .. ..	942 0 3

Head II.

Unreserved or District forests.

131. As yet no uniform system of administering district forests has been initiated, but commutation and farming of leases have been the system in some districts, and except in Nimar, nothing novel, or at least what had not previously undergone a more or less partial trial, was attempted. There a highly elaborated and, as it proved in practice, a system most appropriate to the conditions of the district was pursued. It consists of a combination of commutation and annual license tickets. The details of the principle and the system of check and control, at first sight, seem rather complex. They are too varied to give here more than an outline, but the scheme has stood the true test of practice, and in the hands of Captain Forsyth, Deputy Commissioner, by whom it was matured, proved highly successful, both in a fiscal sense and in commending itself much to the people, their wants being freely supplied, while they were not only relieved from the distasteful interference of speculators, but in a measure contributed themselves to the giving effect to the scheme.

Nimar.

132. The foundation of the scheme is a table of rates in which all forest produce is divided into two classes, the charges for one class being fixed for commutation, the enjoyment of the other being available by license. This table is preferable to that originally arranged in which a separate rate was fixed for each individual article.

No. 1 was a commutation ticket which entitled a householder to remove from any Government waste his domestic and agricultural requirements in small timber, firewood, grass, &c., prohibited classes of timber reserved. The price for a year one rupee. Large quantities of timber for building or sale were not removable under this.

No. 2 was a special ticket for defined quantities of certain produce at fixed rates per article.

No. 3 was a commutation ticket for grazing, at a fixed rate per head of cattle per annum, giving admission to all Government waste.

No. 4 was a special ticket for grazing for short intervals, to suit Bunjaras and others.

No. 5, was a special ticket issued to established bazar traders for given periods at reduced rates for the import of firewood, &c., into large towns, the inhabitants of which are thus served.

133. These tickets were made available through all district and village officials with each of whom a current account was opened, by balancing which a check was obtained as to the number of tickets issued, and Tehseel receipts represented the amount of cash deposited which should correspond with the value of tickets issued. Infringement of rules was guarded against by the entertainment of a preventive establishment, a small percentage was paid on issues to distributors and inducements were held out to informers to procure detection of offenders.

134. The gross receipts of the year amount to Rs. 38,412, and charges to Rs. 5,673. This is the income for nine months of Captain Forsyth's system, as the leases of the previous year had three months to run during which only Rs. 283 accrued, and the Deputy Commissioner considers that this revenue may certainly be made permanent, if not increased.

135. Several minor details which make the principle as nearly perfect as I think possible, have been unnoticed here for sake of brevity.

136. Captain Forsyth thinks the principle applicable to Hoshungabad, Nursingpore, Jubbulpore, Dumoh, Saugor and Nagpore; but there are some difficulties as to its general adoption, one material one being the necessity for inter-district transactions both as to distribution of licenses and the realization of revenue in one district for privileges enjoyed in another. Captain Forsyth in an able manner enlarges on the disadvantages to the State from granting clearance leases, and records some valuable facts as to the prospects of increased trade in export by railway of forest produce.

Hoshungabad.

137. In Hoshungabad the system of farming leases was pursued with an increase of income over the previous year, and the Deputy Commissioner is in favour of that system..

Chindwara.

138. Here too farming combined with direct management on a small scale was carried on, and the Deputy Commissioner suggests commutation for a fixed period of years. This approaches a proposition to re-confer excess wastes, which were assumed by Government under Settlement.

139. The Deputy Commissioner approves of the farming system and with a more convenient method of making forest produce available and regulating grazing dues for cattle in transit to other districts, all grounds for complaint will have been removed.

140. The actual income of the year has about maintained itself.

Baitool.

141. Here a large surplus on the income of the preceding year was obtained, (1) by permitting the wealthier landholders to resume the privileges which they formerly enjoyed in excess waste, under an annual commutation and an increase of 10 per cent on their payments of the former year, (2) by holding certain places under direct management, and (3) by farming the privileges in those portions of the district which border on the more open Berar country.

142. The method by which the landholders recouped themselves does not appear and the demand was made the basis upon which duty on forest produce was regulated.

143. This district affords but a limited field. The farming of leases was continued, and the Deputy Commissioner observes the necessity for restrictive measures in certain proportion of the wooded areas to be opened in rotation, so as to secure the jungle from extirpation

Nursingpore.

144. Here again is a surplus over the previous year's income, and the result was obtained by farming leases, collecting posts on lines of traffic, direct management and permits. This is matter for felicitation, as in three Tehseels the cutting of five sorts of timber in addition to those already prohibited was completely stopped, and in one Tehseel the same sorts of timber were only cut under restrictions as to dimensions. This may diminish income, but the Deputy Commissioner considers the loss will be most fully counterbalanced by the advantage to and preservation of the jungle.

Nagpore.

145. This year the leases were sold for much smaller areas than heretofore, a practice which brought them within reach of small landholders, prevented large monopolies and freed the people in great measure from the exactions and espionage of speculating contractors.

146. Here there has been little if any change in the system, a partial commutation which was introduced in 1866-67, by the then Deputy Commissioner. It was, however, considered necessary to make Mowah more accessible at cheaper rates to the population to whom it is an actual necessary of life. The right to collect was commuted for by the headmen of villages for one anna per house, and he recouped himself by accepting one-fourth part of the quantity collected as his share.

Chanda.

147. The income this year exceeded that of last by about 17 per cent.

148. The system pursued was a combination of direct management and usufruct leases, the area about 205 square miles being divided into sufficiently small tracts to secure the people from the pressure practicable from extensive monopoly. A surplus as contrasted with last year's income has accrued.

Wurdah.

149. All attempts to prevail upon the population to commute appear to have failed now for a second year. The usufruct of a large proportion of the waste was leased; a portion was held under direct management for a short time; and in some of the wilder and less cultivated parts of the district, the resident population was relieved from tax, contractors being only authorized, to levy on forest produce collected for export by foreigners, and on cattle the property of foreigners in transit to pasturage elsewhere.

Balaghat.

150. Some measures have been taken to protect the teak in a small area to which access, except for grass and grazing, has been denied, in addition to which the cutting of six of the more useful timbers in addition to those already included in the prohibited list has been restricted.

151. Some rather rigorous measures have been adopted to induce the Bygas, a wild hill-tribe, to emigrate from the Sâl bearing lands into the more open parts of the district, and to partially convert Bunjaras from their long established trade of carriers to cultivators. The former question is still in an undecided state.

152. There is a slight decrease of income as compared with former years, which the Deputy Commissioner considers will be on a larger scale as the re-settlement of certain villages progresses.

Bhundara.

153. No report of the forest administration in this district has been furnished.

Jubbulpore.

154. The population declined to commute unless grazing dues were included on the same terms as forest produce, consequently the system was the farm of leases to collect at fixed rates, combined with direct management. There was a material decrease of income, chiefly owing to the transfer of a portion of the district to Dumoh and the diminished demand for timber and fire-wood from the reduction of large Imperial works.

Saugor.

155. The income is affected prejudicially by the unrestricted cutting of former years which has decreased the yield and value of the jungles, and the granting of clearance leases has also contributed to a similar result.

Dumoh.

156. Here the farming system prevailed and the year's income amounts to Rs. 13,007. A heavy balance remains uncollected, owing to the failure of Lac and decrease in the value of grazing dues.

157. A small and by no means unsuccessful plantation has been established, the year's expenditure on which was Rs. 106-6-8, in return for which 2,675 teak plants were thriving well at close of the year.

Seonee.

158. The system of usufruct leases sold by auction was adhered to. It has worked fairly and calls for no enlarged comment. The Deputy Commissioner looks forward to the introduction of a commutation which will commend itself to the people, and also suggests a less strict prohibition of the lopping of Saj, one of the prohibited timbers, as the present restriction militates against the production of the tusser silk-worm, a valuable branch of trade and revenue.

Mundla.

159. Here the increase of income over that of the preceding year is considerable, which the Deputy Commissioner attributes to increased grazing dues, and an exceptional source being the unsanctioned cultivation of excess waste of which it was decided to recover rent.

Raepore.

160. The surplus here as compared with past years is very exceptional, and the system was a commutation for domestic necessaries for home consumption, the head-man of each village paying from 1 to half an anna per rupee of land revenue, or about 6 per cent. For this all Government excess waste was thrown open, and the villagers distributed the amount of their refund to the head-man by the quantity of forest produce required.

161. The only disadvantage in the working of the project was that too large a number of villages commuted and their claims being unrestricted and areas of jungle not apportioned in proportion to their yield, in some instances, committees who came late experienced disappointment, while those who went to work early in the season supplied themselves extravagantly.

162. In illustration of the popularity of the measure, the Deputy Commissioner gives an instance of its adoption by a Zemindar whose tenantry complained of the exactions of a contractor, and believes it yielded increased revenue and produced perfect content among the people.

163. In large towns, the population of which are dependent on importers for their supplies, the right to levy dues on forest produce for home consumption was auctioned, and a fixed tariff drawn up for each town so dealt with.

164. The privilege of levying dues on commercial produce such as lac, gum, resin, dyes, rosah, &c., was sold in lump for the whole district; edible fruits, &c., and grazing dues were farmed also, but in areas of moderate extent.

165. The whole proceeding has worked smoothly and is decidedly successful.

Belaspore

166. An exactly similar principle has been pursued to that carried out in Raepore with equally satisfactory results.

Godavery

167. The cash results do not bear contrast favourably with the preceding year. The system has been the farming one, but evidently on an ill-arranged principle, and the Godavery, the only important outlet for forest produce, has not been hitherto taken advantage of as facilitating the collection of revenue;—there does not also appear to have been sufficient check over the preventive establishment, but Colonel Ashburner, the Deputy Commissioner, has noted all the defects and speaks with much confidence of realising a large revenue and throwing open to the public large quantities of various produce hitherto not turned to such good account as might be.

168. A comparative Statement of the revenue in each district for the year under review and that preceding is appended, reference to which shows an increase over the preceding years collections in 10 districts, the aggregate amount of which stands at Rs. 65,736-1-8, a result obtained, in my conviction, from improved method and machinery, while I am equally convinced that the resources which yielded this large return were a profitable exchange to the population for the demand, and now the realisation of revenue from forest waste having lost that semblance of innovation which attached to its earlier stages, the proceeding is not more distasteful or unpopular than outlay upon any other transaction which makes a fair return.

169. This closes the "first part special" and I shall now proceed with the "second part general."

Comparative Statement of Forest receipts for 1868-69 *and* 1869-70.

Unreserved forests.		1869-70.			1868-69.		
Northern Division.	Jubbulpore ...	7,935	10	11	16,217	14	4
	Dumoh	10.940	14	9	8,886	9	7
	Saugor ...	10,927	9	10	12,925	12	5
	Mundla ...	9,809	13	5	7,193	6	6
	Nursingpore ...	2,850	10	2	3,426	0	0
	Balaghat ..	16,696	13	3	18,411	8	0
Southern Division.	Nagpore ...	18,554	14	3	19,274	7	3
	Wurda ...	10,121	1	4	8,551	14	10
	Chanda ...	27,882	3	9	23,822	8	4
	Seroncha ...	8,109	15	3	11,877	4	9
Eastern Division.	Raepore ...	45,034	2	3	14,135	9	6
	Belaspore	7,933	11	10	4,337	5	7
Western Division.	Hoshungabad ...	20,456	11	0	16,961	15	2
	Baitool ...	23,176	8	4	12,183	3	0
	Nimar ...	34,011	2	5	9,649	15	3
Central Division.	Seonee ...	22,215	3	4	20,007	15	7
	Chindwara ...	13,116	12	11	15,764	4	1
	Bhundara ...	25,124	12	0	23,534	15	2
		3,14,898	11	0	2,49,162	9	4

Head I.

Financial results.

170. These are exhibited in the prescribed forms attached and my review of them may well be confined to a general explanation. The Supreme Government fixed the figures of the regular estimate at

Receipts	Rs. 5,25,000
Charges	„ 5,12,000

Summary of year's expenditure and income.

On reference to Form 21 it will be observed that on neither side has this estimate been realised, the figures exhibited being

Receipts	Rs. 3,81,783
Charges	„ 4,73,189

At first sight this would seem unsatisfactory, but, as has repeatedly been represented, the close of the financial year is the most unsatisfactory time to close the transactions of this department, being just the season when operations are in full swing, consequently incomplete, and with the largest outstanding balances both as income from remunerative work, and advances for its performance.

171. The present year affords an excellent illustration of this, in that within a week after the close of the financial year Rs. 60,031 were paid up of the amount outstanding in the books of the Western Division against the Great Indian Peninsula Railway Company for sleepers accepted, and in the Northern Division the same circumstance, I believe, occurred, but on a very much larger scale, the sum outstanding there being Rs. 1,00,984. These outstandings were not owing to negligence on any one's part, but simply to the complications to which the transactions are subject, when both the staff of this department and that on the railway are most fully occupied with duties to which the very punctual adjustment of accounts must take secondary rank. Thus contrast of the receipts and charges is unfavourable to the former by Rs. 91,406, but the large sum recovered in the northern and western divisions, although too late for inclusion in the assets of the year, yet entitles the department to the credit, at least, of having extended its operations with proportionately profitable results far beyond anything obtained in former years, and were it admissible to exhibit the above recoveries by post entry, the result would prove the more than realisation of the estimate under receipts, while the charges approach as nearly as it is reasonable to expect to the amount calculated.

Cash Abstract

172. Form 22 sets forth the cash transactions of the year, but not being in detail calls for no comment.

Statement of liabilities

173. Form 23 represents the condition of the department rather unfavourably at the close of the year, there being against Contractors. ... . Rs. 1,49,092

Unrecovered	Reserved	Forest Revenue	... „	1,64,706
Do.	Unreserved	Do.	„	19,468
			Outstanding Total Rs.	3,33,268

This is heavier than has been shown in preceding years, but in explanation, I would point out the fact that the above sum is not more disproportionate to the previous years' balances than the extent by which the operations and transactions of the year under report exceed those of former years.

Timber Statement.

174. Form 24 I prefer to deal with in the review of the next statement.

175. Form 25,—the opening balance consists of 28,248 pieces of timber and 18,945 sleepers. This was increased during the year by 2,750 pieces of timber and 39,612 sleepers,—the estimated value of this was Rs. 5,40,338. Sale of 3,075 pieces of timber was effected and 33,146 sleepers, representing an aggregate value of Rs. 2,04,168. In consequence of deterioration the quantity and value of the opening balance of stock are reduced by 3,366 pieces of timber and 4,627 sleepers, valued at Rs. 42,500, in addition to which 96 logs valued at Rs. 4,642 were lost in rafting, and 1,002 were converted into sleepers from the stock of the Western division, valued at Rs. 12,853. The closing balance now consists of 23,776 pieces of timber and 20,467 sleepers, total value Rs. 3,04,854; but this valuation will be subject to further reduction on the completion of the new survey and classification of the Western division stock, which from the inferior quality and dimensions of the timber was found to have deteriorated to an enormous extent.

Statement of timber stock.

176. Forms 26 and 27 being merely the details exhibited in forms 21 and 25, need not be individually reviewed.

Statements of timber sales and expenditure.

177. Form 28 conveys in lump the receipts, charges, assets, and liabilities of this year, and having previously noted the causes which tend to show that smaller results have been obtained than have been in reality, I shall close this part of the report,

Annual revenue account.

Second Part General.—Head II.

General remarks.

178, The previous headings and sections of this report have conveyed details so fully of the year's progress at all points, and notwithstanding my endeavours to condense the matter as much as possible, my review is so lengthy, that I shall confine this part within the narrowest possible limits. I accordingly reserve discussion on the prospects of the department and the management of the unreserved forests for future communications. That marked success has attended the year's administration at all points, is undeniable, and I feel no hesitation in saying that although timber and sleeper work absorbed the energies of the most useful members of the staff, and that the changes amongst the controlling branches seriously affected progress, yet that if works of improvement and conservation have not advanced to the extent which would be desirable, they have certainly more than maintained themselves.

179. The increased income from district forests during a year succeeding one of unusual pressure, is evidence of prosperity among the agricultural classes, and the disposition evinced by District Officers to discuss and test by practice the numerous systems tried for realising the revenue, and at the same time keeping in view the interests of the population, is positive evidence of their well sustained interest in the question, and I most freely beg to record that if I have been able to submit a more lengthy report than usual of Forest Administration and progress, it is solely because I have had at my disposal better material and fuller details than, so far as I can judge, were previously available since the organisation of the department in these Provinces, and I also beg to record my full sense of the obligations which I am under to District Officers generally for their hearty co-operation with me, and for much information gained through my communications with them.

180. In the Northern Division Mr. Thompson, Deputy Conservator, and his staff, have done most excellent service both on sleeper work and other operations. They had much to contend with both from the deficiency of the labour, carriage and food supplies, as also from sickness which bore very heavily on the working parties. The departmental dispensary returns show

1,154 cases, chiefly fever of a bad type, as treated between November and March 47 of which proved fatal, and were it not for Mr. Thompson's excellent arrangements carried out by a native Doctor of whom he speaks very highly, the sleeper works must certainly have come to a break-down. I may also add here that acknowledgments are due to Doctor Kidd, Civil Surgeon Mundlah, for valuable assistance rendered under the above emergency.

181. In the Western Division Mr. Webber, Assistant Conservator, has had time to do but little more than make himself acquainted with the condition of the division and its operations, but in this he has succeeded very well indeed, as is proved by his useful report noticed elsewhere.

182. Mr. Hicks his Assistant, is energetic and promising, and when his energies are properly directed and his responsibilities well defined, I look to him to turn out a good Forest officer.

183. In the Eastern Division Mr. G. Foster, Sub-Assistant, has conducted the charge independently with good judgment and energy, and I can speak in high terms of the interest he takes in his work and his perseverance.

184. The members of the subordinate staff have done well where their responsibilities were properly defined, but there is not one amongst the natives who has earned, or nearly so, the distinction which Sheik Moheoodeen did in last and former years. His name is included in my mention of the staff of the Northern Division.

185. The Head Clerk Soobiah, and another man Doorgachellum in my English Office, have both done service which fairly entitles them to my fullest commendation in their several capacities.

I have the honor to be,

Sir,

Your most obedient Servant,

W. JACOB,

Officiating Conservator of Forests,

Central Provinces.

No. 21.

FOREST DEPARTMENT, CENTRAL PROVINCES.

Annual Summary of Revenue and Expenditure in the different Divisions during the year 1869-70.

CLASSIFICATION	Northern Division.			Southern Division.			Western Division.			Eastern Division.			Central Division.			Abiece Survey.			Total.		
RECEIPTS.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
I Sale of timber at Depots	33,150	7	5	1,415	11	...	8,737	8	6	...	...	...	6,691	2	1	...	...	..	49,994	13	...
II Sale of timber removed by purchasers	8,718	14	2	5,351	6	2	719	5	4	...	...	...	2,932	12	2	...	...	..	17,722	5	10
III Duty on foreign timber	358	8	...	250	...	...	...	...	...	...	...	...	...	...	...	...	...	..	608	8	...
IV Permit fees	26,277	14	4	60,299	12	2	72,998	...	5	50,335	1	4	31,413	4	5	...	...	..	2,41,824	...	8
V Grazing dues	12,430	14	7	1,449	2	...	7,853	3	7	...	...	...	8,706	5	1	...	...	..	30,439	9	3
VI Sale of fruits &c.	6,782	12	4	1,926	6	3	991	3	...	...	...	...	20,527	1	3	...	...	..	30,227	6	10
VII Sale of confiscated timber	42	11	7	55	10	3	...	...	...	2	12	...	1,878	...	...	...	...	..	1,979	1	10
VIII Fines and forfeitures	34	14	...	100	14	6	314	...	1	23	14	...	275	7	...	29	8	..	778	9	7
IX Miscellaneous	3,272	14	4	1,958	7	8	1,107	14	8	1,165	2	...	699	13	...	5	...	..	8,209	3	8
Total Receipts	91,069	14	9	72,807	6	...	92,721	3	7	52,026	13	4	73,123	13	...	34	8	..	3,81,782	10	8
CONSERVANCY AND WORKING.																					
I Timber expenses	2,24,559	...	2	15,483	2	9	36,942	15	3	8,853	6	3	14	...	...	...	...	..	2,85,857	8	5
II Purchases of Stock and Cattle	1,403	6	...	...	11	3	4,309	3	8	...	...	...	...	...	...	...	...	..	5,713	4	11
III Feed and keep of Cattle	1,330	8	6	5,196	10	4	1,562	...	2	816	13	1	741	12	11	613	9	..	10,261	6	...
IV Rent of leased Forests	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	...	...	...
V Charges in collecting revenue on grass, &c.	4,938	...	..	1,720	7	8	2,390	...	...	549	8	...	2,260	...	...	...	...	..	11,857	15	8
VI Plantations	5,307	6	...	134	10	6	9,327	13	11	5,699	1	...	858	9	4	...	...	..	21,327	8	9
VII Forest Work	6,788	7	9	991	..	...	2,151	10	5	1,381	11	10	765	15	6	1,191	4	2	13,270	1	8
VIII Forest Survey	...	...	.	972	12	4	...	...	...	...	...	...	543	8	5	186	7	1	1,702	11	10
IX Experiments on Timber	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
X Communications and Buildings	390	14	...	5,918	7	7	3,218	6	10	369	2	...	5,913	15	11	...	...	...	15,810	14	4
Total Conservancy and Working	2,44,717	10	5	30,417	14	5	59,902	2	3	17,674	10	2	11,097	14	1	1,991	4	3	3,65,801	7	7
ESTABLISHMENTS.																					
I Salaries	22,060	5	4	23,850	9	...	22,509	8	6	6,298	11	....	9,171	11	3	4,403	...	8	88,293	13	9
II Allowances	1,338	13	8	3,816	13	1	3,456	11	7	626	14	7	868	11	1	621	12	8	10,729	12	8
III Contingencies	1,895	1	11	2,191	8	11	2,601	12	8	543	3	4	762	13	11	369	7	4	8,264	...	1
Total Establishments	25,294	4	11	29,858	15	...	28,568	...	9	7,468	12	11	10,803	4	3	5,394	4	8	1,07,387	10	6
Grand Total Expenditure	2,70,011	15	4	60,276	13	5	88,470	3	...	25,143	7	1	21,901	2	4	7,385	8	11	4,73,189	2	1

No. 22.

FOREST DEPARTMENT, CENTRAL PROVINCES.

Dr. *Annual Abstract Account of the Cash transactions of the Forest Department in the Central Provinces for the year* 1869-70. Cr.

Heads of Account.	Rupees.	Heads of Account.	Rupees.
To Cash in hand on 1st April 1869	30,632 9 10	By Expenditure of the Department	4,73,189 2 1
„ Revenue received	3,81,783 10 8	„ Remittances to State Treasuries	3,82,033 4 10
„ Remittances from State Treasuries	4,62,500 11 6	„ Repayments of Deposits	.. .. ..
„ Deposits	500	„ Advances made	1,26,165 3 7
„ Advances recovered	1,28,472 3 2	„ Refunds of Revenue	.. .. ..
Assessed Taxes.		„ Cash Balance in hand on 31st March 1870 ...	24,359 10 8
Income Tax	996 4 8		
Government of India.			
Military Fund, Rs. 180			
Orphan „ „ 200 ...	847		
Uncovenanted Family Pension „ „ 467			
Government of Madras.			
Military Fund	14 13 4		
Total	10,05,747 5 2	Total	10,05,747 5 2

No 23

FOREST DEPARTMENT, CENTRAL PROVINCES.

Annual Statement of Outstandings and Liabilities of the Department on account of Contractors and Disbursers.

Division	Department Debtor.			Department Creditor.			Balances due.	
	At commencement of year	Recoveries in cash, and value of supplies and work done during year	At close of year	At commencement of year.	Payments made during year	At close of year	To Department (outstandings).	By Department (liabilities)
		Rs. A P.	Rs. A. P.	Rs. A P.	Rs. A. P.	Rs. A. P	Rs A. P.	Rs. A. P.
Northern Division ...	..	1,14,995 15 7	1,14,995 15 7	11,769 14 5	2,06,524 8 6	2,18,294 6 11	1,03,298 7 4	4,246 3 1
Southern Do. ...	..	19,832 5 6	19,832 5 6	3,323 15 10	30,819 8 5	34,143 8 3	14,311 2 9	..
Eastern Do. ...	..	1,740 11 0	1,740 11 0	5,886 8 5	2,045 0 0	7,931 8 5	6,190 13 5	...
Western Do. ...	..	96,661 8 4	96,661 8 4	22,276 14 3	98,651 5 8	1,20,928 3 11	24,266 11 7	118 13 0
Central Do. ...	..	3,500 3 10	3,500 3 10	205 13 8	4,320 0 0	4,525 13 8	1,025 9 10	..
Forest Revenue.								
Reserved Forests ...	...	3,617 4 0	3,617 4 0	3,617 4 0	1,64,706 9 7	1,68,323 13 7	1,64,706 9 7	...
Unreserved Do. ...	...	8,475 15 6	8,475 15 6	8,475 15 6	19,468 13 11	27,944 13 5	19,468 13 11	..
Total Rupees ...	...	2,48,823 15 9	2,48,823 15 9	55,556 6 1	5,26,535 14 1	5,82,092 4 2	3,33,268 4 5	4,365 0 1

No. 24.

FOREST DEPARTMENT, CENTRAL PROVINCES.

Statement of Timber brought to Depots from the different Forest Divisions during 1869-70.

Name of River or Division.	Forest.	Description of Timber.	Pieces.	Cubic feet.	Totals of each River		Remarks.
					Pieces.	Cubic feet.	
Northern Division	Beda Ghat ...	Teak.	89	1,579			
	Goaree Ghat ...	...	611	10,130			
	Malkachar ..	...	50				
	Peeperia ...	...	22				
	Kairpance ...	...	76				
	Sagoon Ghat ...	...	19				
	Burmon Ghat...	..	48	9,521			
	Chawarpata ...	...	4				
	Baithara ...	..	24				
	Heerapore ...	...	41				
	Tinrawun ...	...	16				
	Bhutgaon ..	..	21		1,021	21,230	These logs were transferred from one Depot to another.
	Jubbulpore ..	Sâl sleepers.	17,974				
	Mundla ...	...	2,086				
	Suckree Ghat...	...	2,786	130,588	32,647	130,588	
	Mowyee and Suraka ...	...	9,801				
	Gurrakota ...	Teak poles.	1,951		1,951		

Southern Division	Nagpore ...	Teak.	166	4,695 8 0			
	Chanda ..	...	223	4.945 0 0			
	Allapilly ...	...	298	9,712 8 0			
	Do. ...	Sissoo.	2	38 3 0			
	Tulwara ...	Teak.	274	6,806 5 0	963	26,198	These logs were transferred from one Depot to another.
Eastern Division	Bagnuddee ..	...	103	3,483 0 0			
	Hatheebaree ..	..	83	3,159 0 0			
	Raepore ...	Sâl.	49	1,049 0 0	235	7,691	49 Logs were transferred from one Depot to another.
Western Division	Chillorepoora...	Teak.	464	3,430 0 0			
	Bankaburda ...	...	149	1,783 0 0			
	Boree ..	Sleepers.	675	2,700 0 0			
	Bagra ...	...	1,022	4,088 0 0			
	Bowergurh ...	...	1,289	5,156 0 0			
	Kamapoor ...	..	266	1,064 0 0			
	Hoshungabad...	..	61	244 0 0			
	Sohajpoor ...	..	259	1,036 0 0			
	Seonee ...	..	872	3,488 0 0			
	Delakaree ...	Sâl.	2,521	10,084 0 0	7,578	33,073	
TOTAL ...					*44,395	*218,780	* Of these 2,033 logs containing 48,477 cubic feet transferred from one Depot to another are included.

No. 25.

FOREST DEPARTMENT, CENTRAL PROVINCES

Annual Timber Account for 1869-70.

Particulars		Pieces	Total
I—Stock in hand at the following Depots at the commencement of the year.			
Northern Division	Behra Ghat Teak Logs	249	
	Choareegogurh	112	
	Mircheekona	378	
	Sugra Pahar	627	
	Goaree Ghat	3,034	
	Jubbulpore Sal Sleepers	1,844	
	Sukree Ghat	4,800	
	„ Sal Logs	256	
	„ Side pieces	1,339	
			12,639
Southern Division	Aheree Teak Logs	974	
	„ Sissoo	29	
	Nagpore Teak Logs	30	
	Wurdah	130	
	Chanda	125	
			1 288
Eastern Division	Berampooree	46	
	Kamturra Nulla Sal Logs	812	
	Hatheebaree Teak „	148	
	Bagnuddee	182	
			1,188
	Kaleebheet	258	
	Rajaboraree	823	
	Bowergurh	6,169	
	Sowleegurh	2,588	
	Kuttunga	1,132	
	Boree	4,212	
	Mattardeo	144	
	Hurda	515	
	Sohagpore	452	

Particulars.		Pieces	Totals
I—Timber removed by purchasers from Depots			
Northern Division.	Gurrakotta Poles	1,951	
	Goaree Ghat Teak Logs	777	
	Sal Sleepers delivered to G I P Railway	21,698	
Southern Division.	From Nagpore Depot	19	
	„ Wurdah do.	42	
	„ Chanda do.	37	
	„ Chanda do.	11	
Western Division	Timber supplied to Executive Engineer and Dr. Cullen.	138	
	Sal and Teak Sleepers supplied to G. I P Railway	11,448	
	Teak Poles to Executive Engr.	100	
			36,221
II—Timber lost			
Northern Division	In floating operations	96	
Western Division.	Teak and Sal sleepers rejected.	4,627	
	Logs rejected.	3,366	
	Do cut into sleepers	1,002	
			9,091
III—Stock in hand at the close of the year at the following Depots.			
Northern Division	Behra Ghat Teak Logs	338	
	Goaree Ghat do	2,868	
	Suckree Ghat Sal Logs and side Pieces	1,595	
	Malkachar Teak Logs	50	
	Peeperia do.	22	
	Kaeirpanee do.	76	
	Sagoon Ghat do.	19	
	Burmon Ghat do.	48	
	Chawarpata do	4	
	Baletoree do.	24	
	Heerapore do	41	

Western Division.	Bagra	297	
	Hoshungabad	133	
	Ootunghat	73	
	Sowleegurh	2,152	
			18,948
	Sleepers.		
	Ootunghat	47	
	Delakaree	8,809	
	Sowleegurh	1,018	
	Bowergurh	91	
	Bankaree...	2,151	
			12,116
	Teak Poles.		
	Hurda	260	
			260
Central Division.	Teak Stumps	569	
	„ Sleepers	185	
			754
	Total Pieces ...		47,193

II.—Timber received at Depots from the Forests during 1869-70 as per Form No. 24.

Northern Division.	Sâl Sleepers	32,647	
	Teak Poles	1,951	
Eastern Division.	Teak Logs	186	
Western Division.	Teak Logs	613	
	Teak and Sal Sleepers ...	6,965	
			42,362
	Toaal Pieces ..		89,555

	Timbrawun do. ...	16	
	Butgaon do ..	21	
	Mundla Sal Sleepers ..	2,086	
	Mowye and Surakah do. ...	9,801	
	Jubbulpore do. ..	2,920	
	Suckree Ghat do. ..	2,786	
			22,715
Southern Division.	Aheree Teak Logs .. .	101	
	Do Sheshum ..	27	
	Tulwarra Teak Logs ..	274	
	Allapilly do.	298	
	Do. Sheshum	2	
	Chanda Teak Logs	112	
	Wurdah do.	88	
	Nagpore do. .. .	277	
			1,179
Eastern Division.	Berampooree Teak Logs ..	46	
	Kumturra Nulla Sal do. ..	763	
	Hatheebaree Teak Logs ..	231	
	Bag Nuddee do. ..	285	
	Raepore Sal Logs ..	49	
			1,374
Western Division.	Bowergurh Teak Logs ...	4,044	
	Sowligurh do.	3,524	
	Khamapoor do.	982	
	Hurda Hundia do	365	
	Kaleebheet do.	33	
	Boree do.	3,946	
	Sohagpore do.	319	
	Mattardeo do	144	
	Bagra do.	1,067	
	Rajaboraree do.	771	
	Bagra Sleepers	98	
	Seonee do.	1,669	
	Boree do.	484	
	Sohagpore do.	592	
	Etarsee do.	340	
	Shapoor do.	407	
	Ruttunpore do.	16	
			18,221
Central Division.	Teak Stumps	569	
	Do. Sleepers	185	
			754
	Total Pieces ..		89,555

No. 25 *(Contd.)*

Abstract of Annual Timber account for 1869-70.

	No. of Pieces.	Cubic feet.	Rate.	Value.	Total.		No. of Pieces.	Cubic feet.	Rate.	Value.	Total.
			Rs. A. P.	Rs. A. P.	Rs. A. P.					Rs. A. P.	Rs. A. P.
OPENING BALANCE.											
Teak Logs	26,393	2,30,918 1 9		2,35,752 14 4		Sales. Teak Logs	1,024	7,835 5 9	Various.	12,229 8 3	
Side Pieces	1,595	4,115 0 0	1 0 7	4,115 0 0		Teak Poles	2,051	..		1,460 12 7	
Teak Poles	260	0 0 0		260 0 0		Sleepers	33,146	1,32,584 0 0	5 11 11	1,90,478 8 0	
Sleepers	18,945	75,780 0 0		83,807 8 0							2,04,168 12 10
					3,23,701 6 4	Rejected. Teak Logs	3,366	25,914 0 0		23,992 12 11	
RECEIVED DURING THE YEAR.						Teak Poles		..		.. .. ..	
						Sleepers	4,627	18,508 0 0		18,508 0 0	
						Lost. Teak Logs	96	3,094 6 9		4,642 5 0	
						Converted into Sleepers. Teak Logs.	1,002	8,427 2 0		12,853 9 1	
Teak Logs	799	11,855 8 0		15,926 5 8							59,996 11 0
Teak Poles	1,951	0 0 0		1,454 4 7		Closing Balance. Teak Logs	21,835	1,99,488 7 6	1 0 11	1,95,369 0 3	
Sleepers	39,612	1,58,448 0 0		1,99,256 12 0		Sheshum ,,	29	633 11 0		520 9 0	
					2,16,637 6 3	Side Pieces	1,595	4,115 0 0		4,115 0 0	
						Sleepers	20,784	83,136 0 0		1,01,849 12 0	
											3,04,854 5 3
TOTAL ...	89,555	4,81,116 9 9		5,40,338 12 7	5,40,338 12 7	TOTAL ...	89,555	4,83,796 9 0		5,69,019 13 1	5,69,019 13 1

No. 26.

FOREST DEPARTMENT, CENTRAL PROVINCES.

Statement showing the amount realized on account of the different classes of timber sold during 1869-70.

Divisions.	Number of logs sold.	Cubical contents.	Amount realized and due on account of timber sold			Average amount per log.			Average cubical contents of logs.		Average amount per 100 cubic feet			Remarks
		Cubic feet.	Rs.	A.	P.	Rs.	A.	P.	*Cubic ft.*	*ins.*	Rs.	A.	P.	Pieces
Northern Division, Logs 777 Do do Sleepers 21,698 =Logs 7,233 ...	8,010	91,452	1,32,362	11	7	16	8	4⅔	11	5	144	11	8	Timber sold in previous years remaining unremoved at the commencement of the year 34,170
Southern Division, Logs ...	109	2,162	4,055	3	10	37	3	3	19	10	187	9	1	Timber sold during year 2,051
Western Division, Logs 138 Do. do. Sleepers 11,448 =Logs 3,816 ...	3,954	46,804	66,290	0	10	16	12	3	10	10	141	10	1	Teak Poles do. ,
Total ...	12,073	140,418	2,02,708	0	3	16	12	7⅓	11	7½	144	5	9	Total 36,221
														Timber remaining unremoved at the close of the year
														Balance removed from Depots by purchasers during the year 36,221

Deduct amount due but not realized during the year...	1,64,455	10	2
Balance	38,252	6	1
Add sale of 1,951 teak poles in Northern Division ...	1,454	4	7
Do. 100 in Western ...	6	8	0
Add amount realized on account of former year ...	3,617	4	0
Amount collected by District Officers	6,664	6	4
Total shown as revenue on account of timber sales ...	49,994	13	0

No. 27.

FOREST DEPARTMENT, CENTRAL PROVINCES.

STATEMENT showing the amount expended on account of Timber received from the different Forest Divisions during 1869-70.

Name of Division.	Number of logs.	Cubical contents.	Timber expenses.			Conservancy expenses, cost of Establishment, &c., of the department excluding direction.			Total amount expended, excluding direction.			Average amount paid per log.			Average cubical contents per log.	Average amount paid per 100 cubic feet.			REMARKS.
		Cubic ft.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Cubic ft.	Rs.	A.	P.	
Northern Division, Logs 1021 Do. do. Sleepers 32,647 = Logs 10,883 ...	11,904	151,818	2,24,559	0	2	22,726	7	7	2,47,285	7	9	20	12	4	12·9	162	14	1	
Southern Division	963	26,198	15,483	2	9	16,366	2	6	31,849	5	3	33	1	3	27·2½	121	9	1	
Eastern Division	235	7,691	8,858	6	3	8,142	8	5	17,000	14	8	72	5	6	32·8½	221	0	7	
Western Division Logs 613 Do. do. Sleepers 6,965 =Logs 2,322...	2,935	33,073	36,942	15	3	25,763	9	10	62,706	9	1	21	5	10	11·5½	189	9	6	
Central Division	...	...	14	0	0	10,943	9	2	10,957	9	2	...	...	..	...	...	...	...	
Total ...	16,037	218,780	2,85,857	8	5	83,942	5	6	3,69,799	13	11								
Add Direction charges ...	...	...	...	...	...	..	..	...	9,799	7	3								
Grand Total ...	16,037	218,780	2,85,857	8	5	83,942	5	6	3,79,599	5	2	23	10	8	137·½	173	8	1	

Abstract rates per 100 cubic feet.

	1868-69.			1869-70.			Total ...
	Rs.	A.	P.	Rs.	A.	P.	
Timber expenses... ..	64	3	9½	130	10	6½	173
Conservancy and Establishment	51	8	5½	38	5	10½	8
Direction	6	11	4	4	7	8	1
Total ...	122	7	7	173	8	1	

N. B.—1,021 Logs, cubic contents 21,230 are included in the Northern Division portion of the expenditure of the year, being on account of this transport of timber from one depot to another.

963 Do. do. 26,198 are shown in the Southern Division do. do. do.

49 Do. do. 1,049 are included in the Eastern Division do. do. do.

Total .... 2,033 Do. do. 48,477

No. 28.

FOREST DEPARTMENT, CENTRAL PROVINCES.

Annual Account of Forest revenue for the year 1869-70.

	Rs.
Receipts	3,81,783 10 8
Expenditure	4,73,189 2 1
Surplus or Deficit	91,405 7 5
Add (or subtract) difference between Assets and Liabilities at the commencement and close of the year	2,58,864 13 3
Net revenue	1,57,459 5 10

Detail of difference between Assets and Liabilities at the commencement and close of the year.

	At the commencemet of the year.	At the close of the year.	Difference. In favour of the year.	Difference. Against the year.
	Rs.	Rs.	Rs.	Rs.
Value of timber and other stock	3,23,701-6-4	3,04,854-5-3	...	18,847-1-1
Outstandings on account of sales and excess payments to Contractors ...	55,556-6-1	3,33,268-4-5	2,77,711-14-4	..
Total Assets	3,79,257-12-5	6,38,122-9-8	2,77,711-14-4	18,847-1-1
Deduct Liabilities ...	...	..	18,847-1-1	...
Balance	...	...	2,58,864-13-3	..

No. 2330—248, dated 3rd September, 1870.

From—J. W. NEILL, Esq., *Offg. Secy. to the Chief Commr. of the Central Provinces,*
To—*The Secretary to the Government of India, P. W. Dept.*

I am directed to forward, for submission to His Excellency the Viceroy and Governor General of India in Council, the accompanying Report* on the Forest Administration of the Central Provinces for the year 1869-70, with the Chief Commissioner's review of it.

* With 29 spare copies.

No 702 F, dated 18th November, 1870.

From—*The Government of India, P. W. Dept.,*
To—*Chief Commissioner of the Central Provinces.*

I am directed to acknowledge the receipt of your letter No. 2330—248, dated 3rd September last, forwarding the Progress Report of the Forest Department in the Central Provinces for 1869-70, and to communicate the following observations of His Excellency the Governor General in Council.

2. The financial results are not favourable, the expenditure having exceeded the receipts by Rs. 91,405. The receipts amounted to Rs. 3,81,783, a larger figure than was attained in any of the previous years. But in the charges there has been a large increase under "Conservancy and Working," due almost entirely to "Timber expenses" which have risen to Rs. 2,85,857, whereas in previous years they varied between Rs. 19,000 and Rs. 97,000.

This large increase, however, is explained by the efforts which were made to complete the delivery of 50,000 sleepers to the Railway at a short notice.

3. It is also reported that there would not have been any cash deficit; if the amount due on account of the sleepers delivered had been received before the close of the year.

The financial results are reported as follows:—

	Rs.
Cash deficit	91,405
Less value of stock at close of the year	18,847
Total ...	1,10,252

Against this stands the excess of outstandings at the close of the year from Contractors and on account of sales, *viz*:—

	Rs.
1870	3,33,268
1869	55,556
Excess ..	2,77,712

and the difference between these figures, Rs. 1,67,460, represents the net revenue of the year.

In Statement No. 23 an item of Rs. 4,365 is entered under liabilities, which is not understood, and which requires explanation.

4. In paras. 96 and 102 the Officiating Conservator explains a considerable reduction in the value of stock of the Western Division effected during the year, due apparently to unsatisfactory arrangements in that Division. And in para 175 Mr. Jacob adverts to the probability of a further reduction being necessary on the completion of a new survey and classification of the Western Division stock, so that it seems doubtful whether the assets of the Department mentioned above can be accepted at their full value. The result of the new survey and classification of the stock should be reported, and it should be considered whether it would not be well eventually to fix a much lower rate for the valuation of the stock at the close of the year. It is noticed from Statement No. 25 that the average rate comes to Rs. 1-0-11 per cubic foot at the

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P. W. D. Press—7, 3, 71,—70.

close of the year, whereas the selling rate for timber during the year amounted to Rs. 144 per 100 cubic feet, or not quite Rs. 1-8 per cubic foot Considering that much of the stock had probably not arrived at sale depôts, the above rate seems high, and it would seem in every respect to be more satisfactory to fix a lower rate, leaving a good margin for deterioration of stock and other contingencies.

5. The yield of the State Forests or reserves in material during the year is reported to have been 42,362 pieces, measuring 170,303 cubic feet. This includes 39,612 Railway sleepers, mostly sâl, from the Delakaree and Mundla Forests.

In para 27 of Mr. Morris' Review the opinion is expressed that, for some years to come, no timber operations should be undertaken beyond removing fallen and decayed trees. This may be the correct plan to follow in certain Forest Districts; but timber work in each range must be regulated by a regular and detailed plan of operations framed upon the requirements of the forests and the demands of the timber market. The main object to be kept in view is, that these operations should be carried on in accordance with a well-considered plan, and that the labour market should not be disturbed by suddenly expanding, and then again contracting these operations.

6. In para. 21 of his Report Mr. Jacob says that the Mundla Sâl forests must be worked departmentally only as a last resource to procure the removal of the dead timber, as the Government system is too expensive, and superintendence too diffused, to admit of meeting private individuals in open competition with a fair prospect of success. It appears to the Governor General in Council that, though ultimately it doubtless is very desirable to sell the timber standing in the forest, and to leave its working to private enterprise, it has not been shown yet that this plan is practicable at present in the Central Provinces, and under proper management, there seems no reason why this work should not be done as economically by Government as by private agency.

The Conservator's attention in this respect should be directed to the Annual Forest Reports from Burmah, which, during the last few years, have shown conclusively that in that Province the timber operations of the Forest Department realize a higher revenue than the timber brought out by permit-holders on their own account.

7. In Statement 21, which exhibits the abstracts of receipts and charges during the year in the different Divisions, an additional column should be entered for Direction charges, which seem now to be included in one of the Forest Divisions.

8. Statements Nos. 26 and 27 show the amounts realized and expended on account of the timber brought to depôts on Government account. The apparent results are most unfavourable. The sales in the different Divisions are reported as follows .—

	Cubic feet.	Amount realized. Rs	Rate per 100 cubic feet. Rs
Northern Division	91,452	1,32,363	145
Southern „	2,162	4,055	188
Western „	46,804	66,290	142

But the timber brought to depôt cost, without adding Direction charges—

	Cubic feet.	Amount expended Rs.	Rate per 100 cubic feet. Rs
In the Northern Division	151,818	2,47,285	163
„ Southern „	26,198	31,849	122
„ Western „	33,073	62,706	190

and adding charges for Direction, it appears that 218,780 cubic feet cost Rs. 3,79,599, or at the rate of Rs. 174 per 100 cubic feet. At this rate certainly timber operations must be a losing concern, and unless they can be carried on in a more economical manner, they must be greatly restricted. These timber operations are necessarily debited with a large share of the general expenditure of the Department.

The Revenue consisted of three portions—

		Rs
From Reserved forests, timber sales	... ...	49,995
„ „ „ other revenue	... ...	16,889
„ Unreserved „	... .	3,14,899
Total	...	3,81,783

The first item is charged as follows :—

	Rs	
Timber expenses	2,85,857	
Share of Establishment and Conservancy	83,942	93,741
Direction	9,799	
Total ...	3,79,598	
The other items are charged with	93,591	
Total Outlay of the Department ...	4,73,189	

Thus the general charges have been distributed half to the timber revenue and half to the other sources of revenue. So much is clear, that the timber operations must be conducted with the strictest regard to economy, and on a moderate scale. In the Southern Division they seem to have paid their way on a very small scale, but in the Northern and Western Divisions the Sleeper operations seem to have been a source of heavy loss. In one place of the Report (para. 42), Mr. Jacob estimates the probable cost per sleeper at Jubbulpoor at Rs. 6. When the accounts of these operations have been closed, a special report should be submitted, showing the amounts expended on this work in both Divisions, and the sums realized by the sale of the sleepers. The timber accounts (Statements Nos. 24 and 25) deal with *pieces** as the unit; this unit might also be adopted in Statements Nos. 26 and 27, where, by assuming 3 sleepers as the equivalent of one log, the log has been introduced as an artificial unit, tending somewhat to complicate matters. Under the arrangement now suggested, the averages could only be given for 100 cubic feet. The forms of these returns are not prescribed, but merely suggested; they should be modified according to the requirements of the Central Provinces.

* Including logs and sleepers

9. Regarding the management and improvement of the reserves, the following remarks appear called for. Plantations are as yet very expensive in the Central Provinces. The following data are taken from the review of the Report :—

Division	Plantation.	Area, acres.	Number of plants.	Total cost.	Cost per acre
				Rs.	Rs
Northern ...	Garhakota ...	15	6,982	4,383	292
„ ...	Ahere ..	56	41,190	13,959	249
Western ...	Bankaburda ...	40	18,418	7,866	196

	Rs
The total outlay on plantations in the Central Provinces appears to have been, from 1864-65 to 1868-69...	34,622
Add outlay of 1869-70	21,327
Total ...	55,949

In para. 8 of the orders on the Report of 1868-69, a detailed statement was requested, with a descriptive account of each plantation, the area stocked, and its cost to the end of the year. Such a statement is adverted to in the Report,

but has not been received. It should be submitted with the current year's Report, and should show how the total outlay is distributed on the different plantations.

So much, however, is clear, that the results are by no means commensurate with the outlay incurred, and that it will be well to limit expenditure on this account until these operations have advanced beyond the stage of experiment.

10. It is very satisfactory that fires have been excluded for three successive years from two* reserves in the Northern, and for five years from one† in the Western Division. The Officiating Conservator and your predecessor apparently concurred in thinking that, unless the remunerative nature of the outlay for this purpose could be more clearly established, the experiment had better be abandoned. To this proposal the Governor General in Council cannot accede. In para. 286 of his Report for 1868-69, Mr. Jacob acknowledged the advantages of excluding fires from the Boree Forest. The increase and better growth of the young teak reported in that forest seem to be a more important advantage than the comparatively small number of plants raised in the plantation. No information is available regarding the amount expended on account of keeping out fires from the three forests mentioned. A statement should be furnished of the outlay incurred on this account to the end of last year, and in every Annual Report it should be distinctly stated what has been expended on this work. The Government of India does not desire to see efforts made in this direction indiscriminately and indefinitely over all reserves, but the experiment must be continued in selected localities until a sufficiently long experience regarding the cost and its results has been attained. Meanwhile, in the three forests in question, fires must continue to be excluded, and every exertion must be used to attain this result.

	Square miles.
* Jugmundel	53
Choohareegurh	8
† Boree	62

11. The second part of the Report gives an account of the management of the unreserved forests. In the orders on the Report for 1868-69, a full report on this subject was requested. The Chief Commissioner's views are now given in paras. 19 to 24 of the Review. The Governor General in Council understands the old system to have been that the right of working these forests was leased out annually by Deputy Commissioners of Districts. Unfortunately, these leases in many Districts were given for large blocks; they came into the hands of speculators, and oppression of the agricultural population followed. The Chief Commissioner's Circular No. XXVI of 26th May 1868 drew the attention of District Officers to the evils of the system, and suggested that the method of working these forests be more adapted to the requirements of each District. A system of commutation was specially recommended, by which the agricultural population would secure the right of collecting the principal articles of daily consumption, grass, fuel and small timber for domestic and agricultural purposes, by the payment of a fixed annual rate. This commutation system has been adopted in several Districts, of which *Raipoor*, *Belaspoor*, *Chanda* and *Baitool* are specially mentioned.

In *Nimar* a system of licenses was introduced by Captain Forsyth, the Deputy Commissioner, which is reported to have worked well in every respect.

In *Hoshungabad*, *Chindwarra*, *Nursingpoor*, *Nagpoor*, *Wurdah*, *Balaghat*, *Jubbulpoor*, *Dumoh* and *Seonee*, leases continued to be granted, some forest tracts being held under direct management, but in some of these Districts commutation also was contemplated. Mr. Jacob specially adverts to the advantage of selling the leases in small blocks as the best safe-guard against oppressive monopoly.

12. In this important matter, the Governor General in Council does not desire at present to prescribe a definite line of action. The system of managing these forests should, as justly remarked by Mr. Morris, be carefully adapted to the peculiar requirements of each District.

But under all circumstances, it should be borne in mind that no prescriptive rights must be allowed to grow up in these forests. What is said in paras. 138

and 141 of Mr. Jacob's Report appears to make it probable that, under certain circumstances, prescriptive rights may spring up under the commutation system. The payment of fixed annual rates by the agricultural population may eventually be held to interfere with the free disposal of these lands, either for the extension of cultivation, or for the formation of new reserves.

13. The proposal contained in para. 17 of Mr. Morris' Circular of May 1868, to make special arrangements for large towns and the populous tracts surrounding them, by means of special fuel and grass preserves, seems to be an excellent one, and His Excellency in Council will be glad to hear that progress in this direction has been made.

The Circular of May 1868, and the Inspector General's letter to the Chief Commissioner on the subject, of September 1869,* which was adverted to in the orders of January last, will be printed with this Report. Every Annual Progress Report should contain a detailed statement showing the system under which the unreserved forests are worked in the different Districts.

* No 239, dated 28th September 1869, from Inspector General of Forests, to Secretary to Chief Commissioner, Central Provinces.

14. The last paras. of the Chief Commissioner's Review (Nos. 27—8) relate to a proposal to re-organize the Department in the Central Provinces. The main points appear to be the following :—

1st.—No timber operations to be undertaken for some years to come.

2nd.—The area of the reserves to be reduced, and

3rd.—The re-distribution of the Divisional charges.

On these subjects, the Inspector General has submitted a Report† which he addressed to you on the matter being referred to him for opinion. In the absence of a full expression of your views, no remarks appear called for, but a report on the subject is awaited.

† No. 241 of 12th September 1870.

15. It is satisfactory that the services of Mr. Jacob have been mentioned in favourable terms by Mr. Morris.

The Report, with the present orders, will be submitted to Her Majesty's Secretary of State, and will be circulated for the information of Forest Officers in all Provinces.

Book Circular No. XXVI, dated 26th May, 1868

From—C. GRANT, Esq., *Officiating Secretary to the Chief Commissioner,*

To—All Commissioners of Divisions, Central Provinces.

The Officiating Chief Commissioner has lately had under consideration several suggestions for improving the administration of the Unreserved forests, and for lightening the pressure of forest rules in the wilder Districts. After carefully considering these questions by the light of all the information derivable from the experience of some years and several Districts, Mr. Morris has arrived at the conclusion that our present system of administration is not sufficiently adaptable to the varying wants and circumstances of a country ranging in character from the plains of Jubbulpoor and Nagpoor at one end of the scale, to the ill peopled solitudes of Mundla and Balaghât at the other.

2. Few Officers in this Commission will need to be reminded of the circumstances under which the present scheme first took shape. But as the Officiating Chief Commissioner believes that the ill-success of forest administration in some Districts has been partly caused by an undefined idea in the minds of Deputy Commissioners, that by attending to the interests of the State they would be injuring the people of their own particular charge, it seems necessary to explain in clear terms the objects and causes which led the Administration to assume a more or less direct supervision over forest tracts. A bare statement of these circumstances should convince any District Officer who may yet be unconvinced on the subject that, in giving his hearty co-operation to the Administration, he will not only serve the State directly by increasing its reve-

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nues, but he will also confer a no less important benefit upon the people by husbanding the resources of the forests, and by preventing a system of waste which the increasing development of the country was rendering more deleterious every year.

3. Until very lately the agricultural classes had, from their first settlement in these Provinces, enjoyed the privilege of using the vast tracts of hill and forest as if they were virtually ownerless. In the Saugor and Nerbudda territories, it is true, the forests were generally apportioned among the areas of cultivated villages, but the tenure on which even cultivated land was held by malgoozars or farmers was so slight, that they rarely, if ever, appear to have asserted any exclusive claim to forest produce.

4. The result of so prodigal an abuse of the gifts of nature had already attracted attention, when it was determined to re-settle the Saugor and Nerbudda territories. It was seen that, during a comparatively short period in Indian history, fine forests had been entirely swept away, and the supply of even the commoner woods was daily becoming scarcer and more difficult of access. On the other hand, it was obvious that, as the country was by degrees opened out, the local wants for firewood would increase, and a new market would be created for the more valuable kinds of timber.

5. Hence it became necessary to fix upon some system that should at once afford protection to the exhausted timber resources of the country; and the first essential of any such scheme was clearly to place the hitherto neglected forests under some definite charge. From past experience it seemed hopeless to entrust them, with any prospect of ultimate restoration, to the newly-created proprietors, nor, indeed, did it seem right to make over irrevocably to one class the reserves of fuel and wood for agricultural purposes on which all sections of the community depended.

6. The less valuable forests, comprising the great bulk of the waste-land of the Province, were, therefore demarcated in convenient lots and declared to be State property. But as our executive machinery was quite unprepared to assume suddenly the direct administration of estates so vast and various, it was arranged that they should be leased out for short periods; and in order at once to dissipate the idea that, because the State had freely granted a proprietary right in cultivated soil to those who had reclaimed it, or kept it in cultivation, it was therefore bound to part with its forests to those who had taken all from them, and done nothing for them,—it was ordered that the leases should be put up to public auction in the open market.

7. The system thus commenced has now been in operation for five years. Its general results have been to place the ownership and rights in forest tracts on a definite and well-understood footing, and to add to the State revenue a sum amounting in 1867-68 to Rs. 1,94,731. In details it has worked well or ill according to the circumstances of the District, and still more according to the idiosyncrasies of the District Officer. Its conditions are obviously better suited to tolerably well developed tracts of country than to hill ranges inhabited by wild tribes, but it has been also found that, under very similar circumstances, the most various results have been attained by different District Officers.

8. While fully acknowledging the valuable services rendered by some Deputy Commissioners, I am to point out that the common fault has been to pay more attention to the surface than to the essence of forest administration. A general disposal of the whole matter on *one* fixed day,—a punctual submission of returns,—a full realisation of revenue,—and a clear file, have been the advantages attained at the expense of all others. Now it is not for a moment to be denied that these are important *desiderata*; but if they are allowed to blind the eyes of a Deputy Commissioner to the real wants of the people, and to the just claims of the State, the gain derivable from them is, at best, but illusory.

9. A really thoughtful system of forest administration should aim at those far more deeply-seated advantages which can only be attained by good judgment, working on minute local experience. A District Officer should know what blocks have a general and universal value; what have a special value from

their situation with reference to particular groups of villages ; and what have a temporary value from such circumstances as the progress of Railway works. Then he should decide how far these special circumstances warrant special treatment, both with regard to the interests of the State, and the wants of private persons. Least of all should he allow a natural wish for prompt and easy disposition of this branch of his business to prevent all concerned from having a full knowledge of his proposed measures, and thus to throw the forests into the hands of a few speculators who take leases only to trade on the necessities of ignorant villagers.

10. Here it will be impossible to give more than a mere general indication, such as the above, of the mode in which Deputy Commissioners should approach these important duties. The Officiating Chief Commissioner believes that a steady observance of such principles would do very much to amend the working of the present system, as, indeed, has been already the case to some extent under the efforts of the Commissioner, Nerbudda Division. But Mr. Morris is not the less prepared on his part to give further scope and discretion to any Officer who will offer a well-matured scheme for the improvement of his own District administration. I am to repeat that experience has shown that there must be some variety of system, as well as flexibility of administration, and the Officiating Chief Commissioner will be quite ready to give up something of uniformity in favour of practical adaptability. Therefore, for the present, he thinks it sufficient that a few general principles should be laid down defining the limits, but still leaving much room for local suggestions. In these remarks the question will be viewed at first entirely with regard to supplies of fuel, grass, and agricultural necessities, the supply or absence of which mainly affects the body of the people.

11. The various systems under which revenue can be realised from Unreserved forests, appear to be—

1.—Realization by farming of leases.

2.—Direct or "kham" management.

3.—Realization by commutation of forest dues.

4.—Summary settlements.

12. With regard to the first of these, it has already been pointed out that searching and thoughtful administration would do much to remove the disadvantages which attend it. But still there would always remain the risk of illicit exaction from ignorant villagers, and the certainty of considerable inconvenience and waste of time to buyers. It has been pointed out to the Officiating Chief Commissioner that the Contractors often trust more to the fear of detection, than to the completeness of their establishments for the realization of their dues ; and hence buyers are frequently put to delay and difficulty in search for a seller. The same causes sometimes render it difficult for them to find out the boundaries of the blocks from which they are drawing their supplies, and, unless they take care to secure the attendance of the Contractor, or one of his servants, they may find themselves called upon to pay twice for the same thing. Altogether, this system is not easy to work satisfactorily in any but a comparatively advanced and civilized tract of country.

13. Direct management would, perhaps lessen one of these evils, *viz.*, inconvenience on account of absence of a seller, but it might heighten the risk of exaction. It would be almost impossible for a Deputy Commissioner to control successfully a vast number of small transactions scattered over a great extent of remote and difficult country. But though the general adoption of this system is not to be recommended, it might probably be worked with advantage in the case of small-wood and fuel-reserves for large towns, and perhaps in some other cases.

14. The third method, that of commutation of forest dues by a fixed annual payment, is viewed with favour by Major Pearson, the experienced Conservator of Forests. A scheme of the kind would undoubtedly seem to possess very marked advantages. It would add enormously to the comfort of the

people by obviating all necessity for inquisitorial check and multifarious petty account and cash transactions. It would almost annul the risk of exaction; judiciously administered, it should certainly not *lessen* the revenue, and it would probably commend itself to Native tastes and habits.

15. The most obvious objection to a scheme of commutation is, that to be successful, it must be universal. It is possible that some malgoozars might object to commute for their villages, and then it would be necessary to take special measures to prevent their supplying themselves without payment from the Government forests. This might, no doubt, be effected by a system of passes; but this would be open to abuse, and would necessitate a Preventive establishment, so that, unless the desire for commutation were pretty universal over a considerable tract of country, the system would be far from being unequivocally advantageous. But in the Officiating Chief Commissioner's opinion, there can be little doubt that if its advantages were properly explained, and the assessments were carried out equably and evenly, it would be chosen almost unanimously in the ordinary agricultural tracts, that is, in those not situated in the neighbourhood of great towns, or in wild and remote positions.

16. For villages of the last class, it may be necessary to revert to the fourth method, that is, to settle the forest tracts for limited periods with neighbouring malgoozars and villagers. But this course should only be adopted where, as in some parts of Mundla and Balaghât, it may seem absolutely necessary, in order to keep the wild village communities together, and where, from the remoteness and inaccessibility of the waste lands, no risk need be apprehended to the revenue of the forest tracts held by Government for the benefit of the people of the cultivated plains. Indeed, there may be cases where it may be advisable to remove for a time all restrictions whatsoever, except those rendered necessary by forest conservancy, from the forests tenanted by Bygahs and other wild tribes. But in such cases it would be necessary to assure the Administration that so absolute a renunciation of the dues of the State would not involve additional loss by endangering its revenues in other quarters.

17. Weighing well the advantages and disadvantages of each of these methods, the Officiating Chief Commissioner is inclined to conclude—(1), that special arrangements should be made for large towns and the populous tracts surrounding them, by means of fuel and grass reserves; (2), that the people of ordinary agricultural tracts should be allowed to make free use, subject to forest regulations, of the unreserved forests, the forest dues being levied from them in a commuted form, payable by the Head of the village, who would make his own arrangements for distributing the sum by a rate on the villagers; (3), that in remote and wild parts of the country, where a fresh tax might be viewed with apprehension, and where from the remoteness of the forest no risk to the revenue need be anticipated from relaxation of the rules, summary settlements of the forest tracts might be made with neighbouring villagers, and that, in some extreme cases, the forests might even be declared open for firewood and grass.

18. The first of these suggestions should be carried out in any case. The second must depend mainly on the consent of the people; but as has been already said, it can hardly be viewed with disfavour by them if judiciously carried out. But if it be proposed for adoption, its popularity must not be made to depend on a reduction of the forest revenues. It must either commend itself intrinsically, or not at all. The Officiating Chief Commissioner believes that, so far from occasioning a loss to the State, it might be worked so as to afford a large increase to forest revenues,—but this is far from being his primary object in the present scheme. He would first look for the introduction of such order and method as would materially limit the openings for exaction and annoyance to the people. Then by degrees District Officers would feel their way to an equalisation and consolidation of the revenues, which would hardly fail to place them on a better footing. But should the Officiating Chief Commissioner's anticipations not be realised in this respect, then I am directed to request that in those Districts, or parts of Districts, where commutation may not be universally desired, the District Officers should be prepared with thoroughly well-considered proposals for putting the present system on a sounder and more popular footing. If it is to be retained, it must be explained by what checks it is proposed to

guard against exactions and unnecessary inconvenience; in what manner supplies of firewood and grass are to be rendered readily accessible to all; and lastly, how the forests are to be preserved against reckless consumption on the part of the Contractors. And the Officiating Chief Commissioner will rely upon Commissioners to see that no pre-conceived ideas or objections to change shall prevent a full and unbiassed consideration being given to this important subject. Nothing new can be introduced without practical difficulties; but these should neither be regarded as whetstones for argumentative ingenuity, nor as insurmountable obstacles.

19. The Officiating Chief Commissioner will then expect that the circumstances of each District shall be carefully viewed and thought out by its Deputy Commissioner, who will then decide to the best of his ability what mode or modes of collection shall be adopted within his jurisdiction. The Commissioner, on receipt of the District reports, will collate and harmonise the various suggestions of the Deputy Commissioners. From his knowledge of the different Districts and Officers he will be able to assign its true value to each proposal; and a comparison of the different schemes will often enable him to give useful hints to the less experienced Deputy Commissioners, and to point out to them how the same difficulties which they are called upon to encounter have been successfully surmounted by others.

20. The other items of forest revenue, *viz.*, grazing and articles of commerce, such as lac, gums, &c., have not been taken into account in the above remarks, because there is no reason to believe that the collection of the dues on them need be attended with any special inconvenience or hardship. Cattle are sent to graze once a year only, and then for the season, so that the tax on them only involves one single easily calculated payment. Lac, gums, and such like are often collected by Contractors, and in any case they are not requisite for daily life. Even *mowah*, if its collection be properly regulated, need probably occasion no difficulty.

21. But although your suggestions will mainly relate to the staples of daily consumption, such as fuel, grass and small timber for domestic agricultural purposes, District Officers are also requested to touch briefly on the subject of these remaining items of forest revenue, and to explain what place they would assign them in their schemes of forest administration.

No. 239, dated 28th September, 1869.

From—Mr. D. Brandis, *Inspector General of Forests,*

To—Secretary to the Chief Commissioner of the Central Provinces.

In accordance with a wish expressed by Mr. Morris on the occasion of my visit to Nagpoor in February last, I have now the honour to submit a few remarks concerning the system of managing the Unreserved forests in these Provinces, with special reference to the Chief Commissioner's Circular No. XXVI of the 26th May 1868, which was sent to me for information with your docket of the 15th June 1868.

2. My late tour in March and April last has been mostly through the more thinly-inhabited parts of the country, and I have thus not yet had sufficient opportunities of becoming acquainted with any of the more important tracts of the unreserved forests.

I beg, therefore, that the Chief Commissioner will consider these remarks as preliminary suggestions only, which a greater knowledge of details may induce me to modify in some respects.

3. At the outset, I would suggest the use of the term State Forests for the Reserves. Crown Forests, the designation used in England for the *New Forest, Dean Forest,* and the other lands under the control of Her Majesty's Commissioners for Woods and Forests, appears less suitable in this country.

The French Forest law recognizes the following main classes* of forests:—

* Note.—There are two other classes besides, which it is not necessary to mention here.

1.—Les bois de l'Etat (State Forest).
2.—Les bois et Forêts qui font partie du domaine de la Couronne (Crown Forests, properly speaking).
3.—Les bois des communes et des établissements publics (Village and other communal forests, and forests of public institutions).
4.—Les bois des particuliers (Private forests).

4. The Unreserved forests have no analogy in Europe, and in India this class is not intended to be permanent: it necessarily has a transitory character. As far as we can see at present, it seems probable that eventually a portion of the Unreserved forests will be attached to the State Forests, another will be sold or leased out for cultivation, and the remainder will be formed into communal forests and grazing grounds, which will be attached to towns, villages, or other communities.

Should the Chief Commissioner desire to substitute another term for that of "Unreserved Forests," these lands might, perhaps, be designated as "District Forests."

5. Within the present limits of the District Forests are included vast tracts of country that are useless for forest purposes, but are fit for pasture, and there are lands of considerable extent which are fit for the plough. Again, there are other tracts which can best be utilized as forest land. The principles which should guide the disposal of these different classes of land will not be the same in all Districts. But it is evident that, under all circumstances, it will be expedient that Government should retain perfect liberty as to the disposal of those lands. From this follows the necessity of carefully guarding against the springing up of fresh prescriptive rights in the Unreserved forests. In the Districts where the settlement has been completed, I understand that, as a rule, no rights of occupancy, or forest rights, or other customary rights, have been recognized.

6. The Circular of May 1868 justly urges due regard for the different requirements of the Unreserved forests in different parts of the Province. In the wild and remote hills, where there is a superabundance of forest, and where the more valuable tracts have already been reserved, no harm will, I believe, be done if the inhabitants are allowed the unrestricted usufruct of the Unreserved forests, provided it is clearly understood that the privilege may be resumed by Government at any time. This remark does not, of course, apply to those tracts of jungle where the occupancy right of hill tribes for the purpose of *dhya* cultivation may have been acknowledged. Such tracts are not included within the Unreserved forests.

To collect the revenue from those who resort to the Unreserved forests in the wild and remote hills, from a distance, either for the purpose of grazing their cattle, or for timber or other forest produce, special arrangements may, I suppose, easily be made. This seems to be in accordance with para. 20 of the Circular.

7. Again, in the vicinity of large towns and populous tracts, the proper course appears to be, as indicated in the Circular, to establish additional forest reserves. Unless it should be decided in special cases to entrust the management of these reserves to the care of the village or Municipality, the charge of these forest tracts should eventually devolve upon the Forest Department. A special Department having been formed, it seems right that its machinery should have ample opportunity for development, and it seems expedient that the management of all demarcated public forests should be entrusted to it.

8. Many of these Reserves would not be placed on the footing of State Forests; they would, in many cases, be assigned to towns or villages, or groups of villages, whose inhabitants might be allowed to draw from these tracts the forest produce required by them on payment of an annual rate, or on payment according to a scale of rates for the different descriptions of forest produce actually consumed. These jungle lands would, however, be subject to a regular system of management; it would probably be found expedient to introduce a rough system of rotation, one block being opened annually, while the remainder were closed.

9. As the first step in this direction, I would suggest that, in each District a list be drawn up of those blocks of waste-lands the maintenance of which appears to be necessary for the surrounding population; that these blocks, if approved by the Chief Commissioner, be excluded from the list of waste-lands available for sale, and that no clearance leases be given in these tracts. These lists might be drawn up by the Divisional Forest Officers in communication with the Deputy Commissioner; they might be revised by the Conservator of Forests in concurrence with the Commissioner of the Division, and be submitted to the Chief Commissioner by the Conservator. In those Districts where maps of the Topographical or Revenue Survey have been completed, the boundaries of the blocks thus reserved from sale should be entered on maps of a suitable scale, copies of which would be kept in the Offices of the Deputy Commissioner and of the Divisional Forest Officer. The waste-lands thus withdrawn from the operation of the Waste Land Sale Rules would be available for the formation of additional reserves, or demarcated forests, for the purposes indicated above.

10. The principal difficulties have apparently been experienced in the management of the Unreserved forests in ordinary agricultural tracts, and in these parts of the country it is proposed to introduce the commutation of forest dues by a fixed annual payment, which I understand is to be levied from the inhabitants of all villages that have hitherto been in the habit of obtaining forest produce from the Unreserved forests.

These rates will, I understand, be fixed at so much for house, or for plough, or in another manner. The payment of these rates will give the right to collect the staples of daily consumption, fuel, grass and small timber and bamboos for domestic and agricultural purposes, but not for sale, and would not ordinarily include permission to graze cattle, and to collect *mowah*, fruits, lac, gums, and other forest produce.

11. Now, I consider it quite immaterial in what manner the forest revenue from these tracts is collected, provided the mode of collection is such as not to facilitate oppression, and provided the hands of Government are left unfettered as regards the disposal of these tracts, and as regards the adoption, if need be, of some regular system of management.

12. It is stated that the system of annual leases has been productive of much oppression, and if this evil cannot be avoided, the system must, as a matter of course, be given up. Yet it appears right, when discussing the question generally, not to omit the consideration of its possible advantages. And I cannot deny that this system of annual leases has often appeared to me to be capable of development in the right direction.

By this time the relative value of most blocks of the unreserved forests is, I suppose, fairly known, and the leases need not, therefore, hereafter be sold to the highest bidder, but may be granted to approved persons who might eventually be held responsible for the protection and a certain order in the management of the forests. Malgoozars, or others living in the vicinity of the forests, might be selected in preference.

13. This arrangement has clearly the advantage that some persons are in charge of the forests, who may, in course of time, be employed to effect a better protection and management. I do not wish to imply that the system of leases as established at present has had any beneficial effect as regards the conservancy of the forests, but merely that under favourable circumstances it may be used for that purpose. The lessee might, in course of time, be entrusted with the protection and management of the tracts leased by him under the control of the Forest Department. Moreover, the system of annual leases has certainly the advantage that it guards against the growth of fresh forest rights.

14. The commutation system appears to me not to be without practical difficulties. The inhabitants of some villages have hitherto been in the habit of supplying their requirements from the malgoozaree or zemindaree forests; others have resorted for certain articles to these, and for others to the Govern- forests, and it seems under these circumstances difficult to determine what

villages are to pay the commuted rates, and what villages are to be exempted. Nor do I fully understand how the people are to be compensated when the area and productiveness of the unreserved forests comes to be decreased, either by the grant of clearance leases, or by the sale of waste-lands, or by the deterioration of the forest in consequence of unrestricted consumption, or any extraordinary drain upon its resources.

15. The payment of annual rates may, even in course of time, come to be regarded as giving a prescriptive right to the produce of the forest, and in case the necessities of the District should hereafter demand a change, such as the adoption of a system of rotation, or the like, those who on payment of an annual fee have for a series of years been in the habit of procuring their forest produce where and how they liked, may feel themselves aggrieved by the introduction of such a system of rotation. Every grant of waste-lands, and every other diminution of the jungle area, or its productiveness, may be a source of embarrassment to Government and most be met by a corresponding reduction in the forest assessment or by other concessions.

16. In some parts of the Nursingpoor and other Districts, the lessee have themselves introduced a system of commuted payments. Instead of levying payment at certain rates on the produce removed by their customers, annual fees are paid to them, which are fixed at rates varying in some parts from 4 annas to Rs. 2 for the different classes of customers.

There appears to be no objection to commutations in this form, for the lessee can only dispose of what he has leased, and in those Districts where annual leases are maintained, the system of commuted payments of this sort may, with advantage, be encouraged. The plan would remove one of the objections raised against the system of leases, that the supplies of the necessaries of life are not readily accessible to all, and it might, to a certain extent, serve as a check against exaction and oppression.

17. The practical result of the suggestions offered in this report would be, that gradually, as necessity arises, such forest lands as will not be included in the State forests would be demarcated and assigned to village or other communities, and that in such forests a rough system of cutting and pasture by rotation would be introduced. When this has been effected, then it is immaterial as regards forest conservancy whether payment for forest produce is made in the shape of an annual rate, or in any other manner.

If the system of commutation is introduced in any Unreserved forests which have not been thus demarcated, care should be taken to leave Government free and unfettered as respects the disposal and the management of these lands, and to make no arrangements which may give rise to claims of forest rights.